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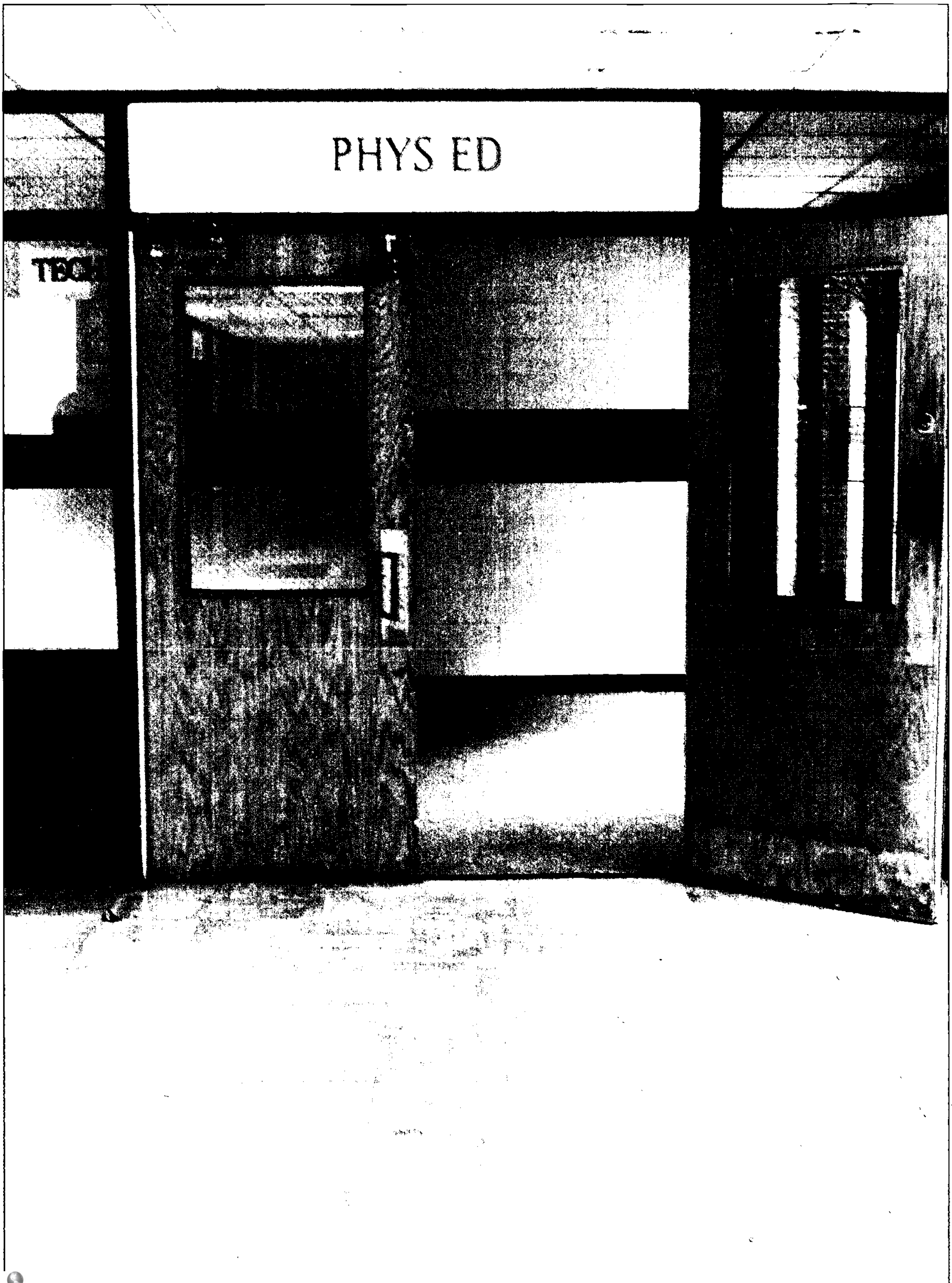
ABSTRACT

The New England economy faces even more challenges and uncertainties than the nation as a whole. The Federal Reserve Bank of Boston and its staff have been involved in the challenges facing public education in New England for many years. Last summer, the Bank's 47th annual economic conference focused on some of these challenges, exploring educational change in the 21st century in this country and around the world. This annual report focuses on education in the New England region, tackling the nature of reforms taking place and assessing progress. The report is divided into nine sections: (1) "Letter from the President"; (2) "Restructuring Public Education"; (3) "2002 Bank Highlights"; (4) "Bank in the Community"; (5) "Board of Directors"; (6) "Senior Officers"; (7) "Advisory Councils"; (8) "Financial Statements"; and (9) "Officers by Department." (BT)

education reform in new england

federal reserve bank of boston
2002 Annual Report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contents

President Cathy Minehan and First Vice President Paul Connolly view plans for the New England Economic Adventure, the Bank's new interactive learning center for economics, opening in 2003.

letter from the president

Change, Challenge, Uncertainty, Commitment. These four words characterize 2002 for all of us here at the Federal Reserve Bank of Boston.

2002 was a year of major change. It saw the intensification of a number of efforts initiated with other Reserve Banks to improve the products and processes that deliver financial services to the nation. These activities engage about 40 percent of our staff in Boston and Windsor Locks. For some time now, the consolidation of the nation's banking system, advances in technology, and our own ongoing commitment to improving our efficiency in providing these services have driven increased standardization, centralization, and specialization among the Banks. In this process, the Boston Fed has become a System resource in several areas, such as Internet firewall management, check image services, and operational support for Fedwire funds and securities transfers. At the same time, other Reserve Banks have also taken on roles that support operations Systemwide. These have included developing a new standard platform for processing checks, which, as 2003 opened, staff in Boston were busy implementing for the 4 million checks we process each night.

In 2002, we also learned through new Federal Reserve research that the use of checks is declining faster than we had anticipated, while the use of electronic payments is growing rapidly. That new information prompted swift action at all of the Reserve Banks, including the Boston Fed, to prepare our check operations for the future. In this new environment, developing and honing our own unique competencies, while outsourcing other activities, has become even more important. In the meantime, we must meet the simultaneous challenges of making a

major operational conversion while reducing costs, meeting our efficiency goals, and sizing our operations to the new realities of check. The old paper world of financial services is disappearing rapidly. This change is good for the U.S. economy, but it requires major adjustments on our part as well.

Challenge, uncertainty — the economy has also faced a great deal of both over the past year. The ongoing overhang of the spending excesses of the late 1990s, combined with corporate governance problems and geopolitical concerns, exacerbated market volatility, weakened confidence, postponed spending decisions, and diminished confidence about the future. After a mild recession the previous year, 2002 provided a bumpy start to the recovery, with no job growth and unusual caution on the part of investors and businesses. Since much of the world remains dependent on a U.S.-led recovery, growth in our major trading partners also turned lackluster. With the weather and the situation in Iraq improving, we now look for signs of a more vigorous and sustainable recovery.

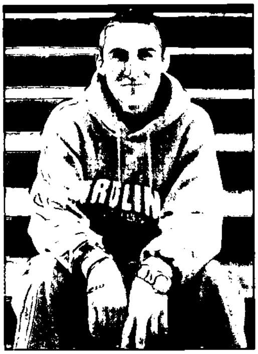
The New England economy faces even more challenges and uncertainties than the nation as a whole. Since the beginning of 2001, employment has dropped by nearly 5 percent in Massachusetts, the largest decline in any state. Employment in other New England states has fared somewhat better, but everywhere the hardest-hit sectors were those linked to the boom times of the late 1990s — that is, computers, software, and other high tech manufacturing. Now an upturn in the region depends on improvements in capital spending in the rest of the country. An investment recovery will occur; the question remains when.

Here at the Bank, commitment provided an anchor in the midst of these many changes, challenges, and uncertainties. As always, we remain committed to providing the highest quality financial services, bank supervision, and research for our constituents. As one example, the Bank and its staff have been involved in the challenges facing public education in New England for many years. Last summer our economic conference focused on some of those challenges, exploring educational change in the twenty-first century in this country and around the world. This year's annual report essay focuses on education here in the region, tackling the nature of reforms taking place and assessing progress. Later this year, we plan to open our New England Economic Adventure and Resource Center. This technically advanced facility will demonstrate yet again our continuing commitment to education in general and to economic education in particular.

The Bank is most fortunate to have the assistance of many talented and committed people from around the region who participate on our various advisory boards and work with us in other ways. We owe them our thanks. The members of our board of directors, in particular, play an important role in providing oversight and direction to Bank management. One director retired from the board this year. William O. Taylor, Chairman Emeritus, *The Boston Globe*, served as a director for six years and as the Bank's chairman in 2002. We greatly appreciate Bill's insightful leadership and counsel and wish him all the very best.

Cathy E. Minehan

Cathy E. Minehan
President and Chief Executive Officer



"This year's annual report essay focuses on education here in the region, tackling the nature of reforms taking place and assessing progress."

8

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small steps in the right direction?

restructuring public education

When the term "knowledge-based economy" first entered popular discussion — sometime around the early 1980s — the focus was exclusively on scientific, technological, and business leadership. Only gradually did our society come to appreciate the pervasiveness of the knowledge-based economy. It affects not just the demand for high-level technical and entrepreneurial talent but, indeed, the job requirements for virtually all types of work. This growing realization has laid the foundation for broad-scale reforms of education in the United States and many other nations.

The restructuring of public education has been promising and exciting for some participants in this process. For others, it has been extremely frustrating. These varying, strong reactions probably are inevitable when our communities and families, and particularly our children, are directly involved. In this essay, we attempt to take a dispassionate look at education reforms. Why are they occurring? What is involved, and how do the current efforts differ from past attempts at education reform? Are the New England states at the leading edge or resistant to change? How does the focus of reform vary from state to state? What are likely to be the remaining challenges in educational restructuring?

A More Demanding Job Market

Most people would agree that education is a major determinant of a person's economic opportunities. It is worth pausing, however, to consider how much more true this statement is today, compared with just a few decades ago, when the baby boom generation was entering the workforce.

Today, a high school diploma is a virtual requirement for steady, successful participation in the U.S. labor market. Occupational choices, a livable wage, and job stability are contingent on having at least this diploma. Further, as the U.S. economy depends less on manual labor and more on knowledge-based endeavors, high school dropouts have much narrower options than they had before.

The number of factory worker jobs has fallen one-fifth from what it was in the 1970s. Even after taking account of the growth in low-end jobs outside of manufacturing, the types of jobs most accessible to high school dropouts — service work, craft and repair positions, machine operator jobs, and laborer and farming occupations — have declined noticeably as a share of all jobs in the economy.

The declining demand for manual labor has led to significantly lower wages for dropouts. In 1970, the average weekly wages of a high school dropout working full time were 79 percent of a high school graduate's wages. By 2000, an employed dropout could expect to earn only 68 percent of the earnings of someone with a high school diploma (but without a four-year college degree) and considerably less in constant dollars than what a dropout was earning three decades earlier.

The growing gap cited above refers to high school graduates and dropouts who are working. More significantly, whether students graduate from high school increasingly determines whether they have jobs at all. In 1970, dropouts were 92 percent as likely to be participating in the labor force as high school diploma holders. By 2000, this figure had slipped to 77 percent. Likewise, unemployment is an increasingly greater reality for those without a high school degree. In 1970, 4.6 percent of high school dropouts in the labor force were unemployed, but by 2000, the number had risen to 7.6 percent. By contrast, the unemployment rate for high school graduates changed very little.

Increasingly, greater financial comfort and broader career options hinge on continuing education beyond high school. In the knowledge-based economy, those with a four-year college degree are dominating the most dynamic parts of the job market. Well over 80 percent of college graduates are employed in one of the three fastest-growing occupational groups: professional, managerial, and sales. College graduates represent the bulk of the workforce in the two highest-paying occupational groups, holding nearly three-quarters of professional and technical jobs and half of executive and managerial jobs. Having held sizable shares of these jobs three decades ago, high school graduates are finding themselves increasingly crowded out of career opportunities by college graduates.

The earnings for those without a college degree have declined in relation to the earnings of college graduates. In 1970, the average high school graduate working full-time earned 69 percent of a college

Baby Boomers' Job Market in 1970	High School Dropouts	High School Graduates[a]	College Graduates
Percent of the working-age population	39.1%	48.9%	12.0%
Average weekly wage in constant 2000 dollars	$521	$663	$963
Unemployment rate	4.6%	2.9%	1.3%
Labor force participation rate	64.6%	70.0%	80.1%

Today's Job Market 2000	High School Dropouts	High School Graduates[a]	College Graduates
Percent of the working-age population	14.1%	59.3%	26.6%
Average weekly wage in constant 2000 dollars	$452	$661	$1125
Unemployment rate	7.6%	3.4%	1.6%
Labor force participation rate	60.5%	78.9%	86.7%

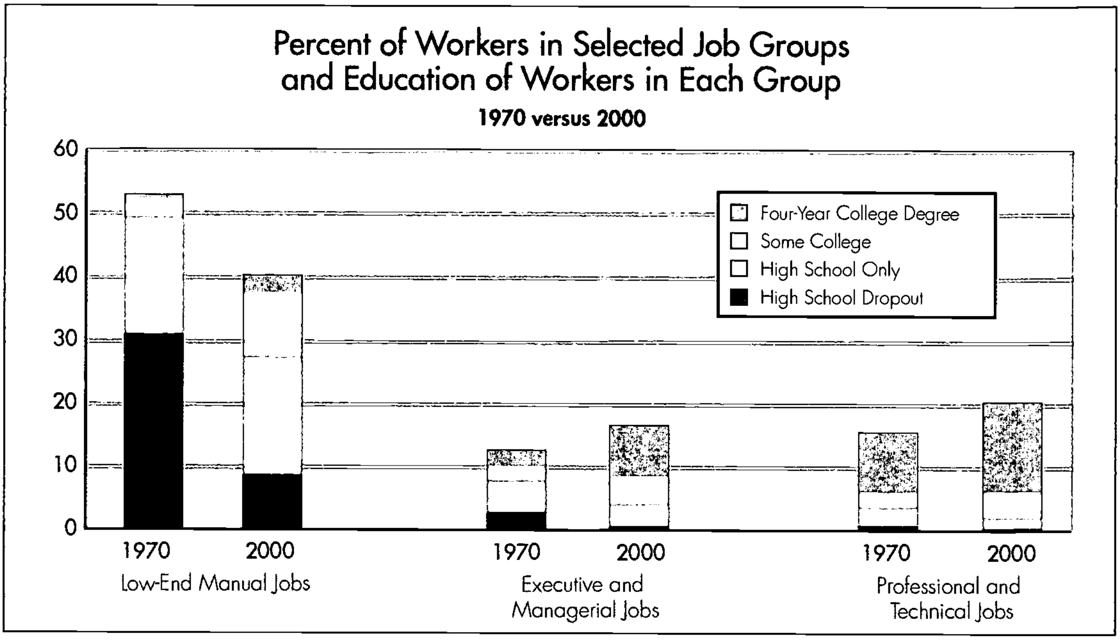
[a] Includes persons with less than four years of college.
Source: Current Population Survey, U.S. Census Bureau.

graduate's average weekly pay; by 2000, this ratio had fallen to 59 percent, illustrating the growing premium associated with a college degree.

In an important 1996 book on educational requirements in the changing economy, Professors Richard Murnane and Frank Levy studied entry-level hiring practices at manufacturing and financial services companies.[1] They concluded that certain "new basic skills" are necessary to obtain a middle-class job. For example, employees must be able to read and perform mathematics at a ninth-grade level. However, according to the National Assessment of Educational Progress (NAEP) standardized tests — often called "the nation's report card" — close to one-half of U.S. high school students do not meet these criteria.[2]

Murnane and Levy also found that new hires need skills beyond basic reading and math. Employers expect them to be able to solve semi-structured problems by forming and testing hypotheses, to work in groups with persons of various backgrounds, to demonstrate effective verbal and written communication, and to use personal computers for tasks such as word processing. These requirements were not considered "basic" in a past when many jobs were highly routinized or made use of older technologies. But even though today's jobs depend on these new skills, many U.S. high schools have not developed techniques for ensuring that their graduates meet these job market requirements.

In summary, the restructuring of the U.S. economy and the shifting nature of job requirements have led to greater rewards for academic skills — and more severe penalties for a lack of these skills. In this sense, schools are being held to a different standard than they were a generation ago.



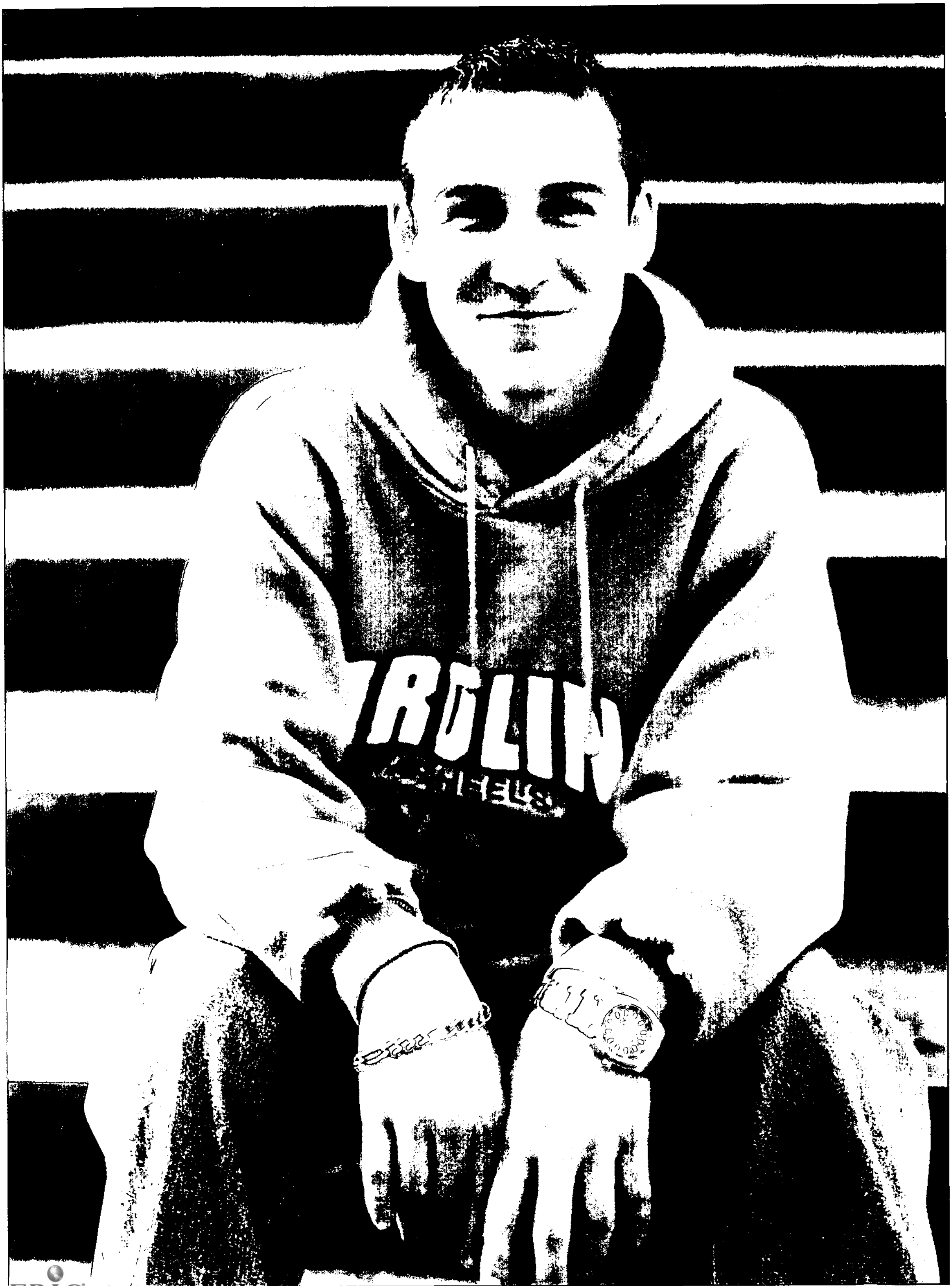
Source: Current Population Survey, U.S. Census Bureau.

A Different Set of Students

At the same time that American employers are expecting more of their new hires, a convincing argument can be made that schools are being required to educate a more challenging student body. Nationwide, the school-age population is much less homogeneous than it was in the 1960s and 1970s, as students represent a more diverse mix of ethnic and racial backgrounds. Family structure also has changed, with more students now living in single-parent households. While these national trends have challenged all U.S. schools, urban schools stand out. Large cities have disproportionate shares of school-age children living below the poverty line, lacking English language skills, or residing in unstable households. Furthermore, cities have seen more dramatic increases in these types of students than is the case in rural or suburban communities.

Consider the basic statistics on poverty. One-fifth of American families with children living in urban areas have incomes below the poverty line, while the fraction outside urban areas is less than 12 percent, a gap that is more than twice as large as it was in 1970. Some of the extra needs of poor students are met by federal and state governments. For example, the National School Lunch Program and Medicaid cover far greater percentages of school children in the cities than in the suburbs. However, broad-based, means-tested programs do not directly address all of these children's needs. For example, one of the reasons for the high incidence of poverty in cities is that almost 40 percent of urban children live in single-parent households. This means that urban school systems are expected to provide more extensive after-school and summer programs to help fill the gap in student support systems, compared to other communities.

Cities have also seen dramatic growth in minority students. Nationwide, non-whites and Hispanics accounted for 23 percent of school-age children in 1976 and 36 percent in 2000. In urban areas, minority students make up the majority of the population, accounting for 64 percent of school-age children — up from 44 percent in the 1970s. As a consequence, city schools increasingly are serving students whose parents have had less access to high-quality education than is the case nationwide. Moreover, urban minority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students are less likely to have the community role models and peer influences that are conducive to academic and economic achievement.

Central cities also contain a disproportionate number of students who speak a language other than English at home. In 1995, 14 percent of all 5- to 14-year-old children spoke another language in the home, but in urban areas one-quarter of children in this cohort did. Of these children, only 56 percent were identified as being very fluent in English, while 17 percent could not speak English well. These language deficits make teaching more challenging, and they impose on urban schools the added costs of providing programs to serve large numbers of English language learners, from a wide variety of linguistic backgrounds. The concentration in urban schools of students with limited English proficiency also indicates a greater presence of families who have trouble "navigating" the U.S. educational system.

New Responses

It would be unfair to accuse the nation's policymakers of being asleep at the wheel when it comes to education. After all, as the U.S. economy has grown over the past three decades, the share of national income devoted to elementary and secondary education has grown proportionately. As a result, inflation-adjusted per-pupil expenditures have almost doubled, from about $3,700 in the 1970–71 school year to $7,100 in the 2000–01 school year. Today's teachers have about twice the median years of teaching experience and are about twice as likely to have a master's degree as teachers one generation earlier.

Yet standardized high school test scores in mathematics, reading, and science on average are only marginally higher than before. Moreover, whatever small progress has been made, it has not been sufficient to accommodate the demands of the knowledge-based economy. Nor has sufficient progress been made in closing gaps between the white population and minority groups, or between students from high- and low-income families.[3]

Faced with these realities, state governments throughout the nation have been restructuring their public education systems in recent years. Their initiatives focus on developing explicit expectations for educational achievement and on redistributing education funding and opportunities in ways they hope will prove to be both more equitable and more effective.

To date, the emphasis has been on K–12 education. Primary and secondary education affect the entire population, and it is at these levels — not higher education — that the United States seems to compare unfavorably with other nations. Improving K–12 education for disadvantaged students should help to ensure that more of them have the skills required to find steady, gainful employment. Improving K–12 education in general should also raise the proportion of the population that is prepared to handle college-level studies. In 1970, about one-half of 23-year-olds had enrolled in college for some period after high school graduation, and close to one-quarter had completed a bachelor's degree. Currently, a much higher fraction of young adults (about two-thirds) attempt higher education, but for a variety of reasons, including inadequate pre-college preparation, the college graduation rate is barely higher than it was when the baby boom generation was coming of age.[4]

The Standards and Accountability Movement

Education standards and accountability strike a chord with employers encountering recent high school graduates — notably those coming out of city schools — who do not satisfy today's job requirements. These same students and their families are frustrated when the attainment of a high school diploma does not provide sufficient guarantee that graduates are equipped to handle the next step in their educational or work lives.

Moreover, given the costs that dropouts impose on other members of society when they are unable to find steady work, the public has an interest in creating incentives for more students to complete high school.

Standards-based reforms involve creating statewide benchmarks for what students should know at each grade level and holding schools and students accountable for meeting these standards. Despite the similarity in language used to describe these reforms across states, the nature of student assessments varies considerably. States differ widely in the difficulty and comprehensiveness of the material tested, the depth of the responses required from students, and the implications of the assessments for advancement and graduation.

Massachusetts and Vermont, for example, have taken two different approaches, but both of these New England states have been commended nationally for the quality of their assessments. The Massachusetts Comprehensive Assessment System (MCAS) consists of a variety of multiple-choice, short-answer, and open-ended questions designed to measure students' mastery of the Massachusetts curriculum frameworks developed in the mid 1990s. It requires students to read and write thoughtfully and to understand and apply basic and more advanced math.

Recent studies comparing state exams have found the MCAS to be one of the best assessments in the nation. Achieve, Inc., an organization founded by governors and business leaders at the 1996 National Education Summit to help raise standards and performance in America's schools, uses the MCAS English language arts frameworks as the benchmark by which it measures English standards in all other states. The Education Trust, a Washington-based organization that works for the high academic achievement of students, reports, "The Massachusetts state test, MCAS, shares the high end with the New York State Regents' examination." One of the standout features of MCAS is that questions from past tests are shared publicly, which results in a useful — albeit often contentious — statewide discourse about which skills are important to test.

Starting with this year's seniors, Massachusetts is requiring students to pass the 10th-grade-level English language arts and math MCAS exams to graduate from high school. About half the states around the country have plans to implement such high-stakes exams. Elsewhere in New England, Connecticut and Maine are phasing in exit exams that reflect a blend of state and local requirements for graduation.

Despite the growing adoption of high-stakes tests, they continue to be opposed by many teachers' unions and communities. Rather than use a high-stakes testing approach, Vermont administers several standardized tests to monitor student achievement but simultaneously strongly encourages all schools to require students to build and discuss portfolios consisting of their best pieces of work. The state's Portfolio Assessment measures how well students structure a problem and communicate the solution. It has been praised not only for its innovative way of assessing student skills, but also for encouraging better teaching. Vermont's state education department created committees of teachers to design the assessment system, and professional development continues to play a key role in changing teaching practices to best meet state standards.

Although the emphasis of education reforms to date has been on establishing educational requirements for students, more and more the focus is expected to shift toward a system of accountability for public school systems. Under the landmark federal No Child Left Behind Act, signed into law in January 2002, each individual school is expected to make gains in educational achievement according to state-specified criteria, with the ultimate goal of having all students meet or exceed proficiency standards by 2013–14. Among its many provisions, No Child Left Behind also requires states to ensure that both new and veteran instructors are qualified to teach the grade level and subject matter they are assigned. Begining in the 2002–03 school year, if schools fail to make adequate yearly progress, parents will have the right to transfer their children to better-

performing schools or to receive federal education funds for supplemental education services, such as tutoring and summer programs.

No Child Left Behind mandates that the general proficiency standards must also apply to subsets of the school population that traditionally have underperformed. It explicitly mentions several subgroups — students who are economically disadvantaged, students from certain racial and ethnic groups, students with disabilities, and students with limited English proficiency — thereby raising the attention devoted to these categories of students and creating the very real possibility that otherwise highly rated schools might be considered deficient if all subgroups do not perform adequately.

As standardized testing becomes the primary vehicle for assessing schools around the nation and, perhaps more importantly, for determining the allocation of resources and pupils among schools, it becomes crucial to have accurate measures of how well schools are performing. For example, low test scores could indicate that a school is doing a poor job in teaching children the skills that are being examined. Alternatively, they could indicate that the school is serving a challenging set of students.

To date, our capability of distinguishing between these explanations is limited because relatively few states have developed procedures to track the "value added" by schools. According to a survey conducted in 2001 by the CREDO institute at Stanford University, only Massachusetts, New Mexico, North Carolina, and Tennessee were examining progress made by individual students or cohorts of students, thereby mitigating the problem of interpreting scores without adjusting for the mix of students. However, even in such cases where movements in scores from year to year theoretically measure the contribution of schools, they inevitably show considerably more variability than can be explained by changes in teachers, teaching methods, or curriculum, making them somewhat imprecise indicators of actual accomplishment.[5] The issues surrounding measurement of school performance are likely to come to the forefront as federal accountability policies are phased in.

Thinking Outside the Local School Box

Public school choice is a surprisingly old concept in the United States. At times, it has been viewed as a progressive aspect of our educational system, but at other times just the opposite.[6] Starting around the 1980s, education administrators renewed their interest in school choice as a means of counteracting the existing patterns of residential segregation by economic status and race. They also began to view school choice as a means of attracting motivated families to schools that the families supported, thereby improving educational outcomes for their children. In recent years, choice among public schools has expanded, and new alternatives to conventional public schools have begun to emerge.

As of 1999–2000, 25 percent of school districts nationwide allowed students to choose from among schools within their district, and 42 percent allowed them to enroll in a school in another district. These provisions do not necessarily guarantee that other schools will provide slots for students wishing to change schools, or that students will receive adequate information or transportation to enable them to take advantage of existing options. Despite these limitations, of all public school students in 1999, 6.8 million (15 percent) were attending a school they chose as opposed to being assigned on the basis of residential location. Close to 500,000 were traveling to a school outside their home district. By observing how families "vote with their feet," school system administrators obtain useful information about families' perceptions of school quality. These insights potentially can form the impetus for introducing changes in unpopular schools.

Beyond allowing school assignments to reflect family preferences, public funding has started to support

Business Involvement in the Schools

Businesses can thrive or suffer based on the health of the communities they operate in and, most especially, the quality of their communities' K–12 educational systems. Nowhere was this more evident than in the wake of the racially charged school busing crisis in Boston during the early to mid 1970s. The chaos in the streets, as well as the very divisive political discourse, prompted business leaders to form an agreement known as the Boston Compact. Signers of the Compact included the mayor, the school superintendent, private sector leaders, higher education providers, and the teachers' union. The underlying premise was that if students receive a better education, they will have access to jobs and to education beyond high school.

For over 20 years, through its administrative arm, the Boston Private Industry Council, the Compact has implemented private/public partnerships to improve educational opportunities for Boston schools and to connect students with job opportunities. The Council has been active in school-to-career efforts and directs a summer jobs program that has contributed to the virtual end of summer street violence in the city.

During this time, it also became clear that fundamental educational reform was needed to meet the challenges of changing job requirements. A group of involved business activists called the Massachusetts Business Alliance for Education (MBAE) issued a 1991 report entitled "Every Child A Winner!" Concluding that "[t]he public education system is failing to provide its students with the knowledge and skills necessary for them to be productive, informed citizens in coming decades," the study contained legislative proposals for overhauling public primary and secondary education in Massachusetts. Many of the proposals were incorporated into the state Education Reform Act of 1993.

The MBAE report also contained recommendations for added private sector involvement in the schools. It urged businesses to make philanthropic grants to government-administered educational programs, to provide funding for communications instruments aimed at improving parental knowledge of and support for school activities, and to sponsor demonstration projects that could test experimental approaches to applied learning.

Business partnerships with schools and educational administrative bodies have mushroomed since the early 1990s, and not only in Massachusetts. A 1990 nationwide survey found that parent organizations provided the most common form of partnership with schools. A similar survey conducted in 2000 found that partnerships with small corporations had become as prevalent as partnerships with parent organizations, and that the involvement of medium and large corporations had grown considerably.

Businesses have become much more active in core education functions rather than simply engaging in peripheral activities such as providing students with equipment or mentors. In one well-known example, former IBM chairman and CEO Louis Gerstner Jr. launched a multi-million-dollar grant initiative in the early 1990s to fund innovation in the public schools. Together with other leaders from business, education, and government, Gerstner recently has initiated a national project to explore ways to improve teacher quality.

quasi-public and private schools. The most common form is charter schools, which are governed by a group or organization under a contract (a "charter") with either a state agency or a local school board. The charter provides public funding for the school for a specified period of time, typically three to five years, and exempts the school from selected state or local rules and regulations that other public schools must follow. In exchange for this flexibility, the school is held accountable to its achievement goals, and is subject to the revocation of the charter upon review.

The first charter school opened in Minnesota one decade ago, and in 1995, almost three-quarters of the nation's 250 charter schools were located in just three states — Arizona, California, and Michigan. Today, the National Charter School Directory lists 2,695 schools, enrolling a total of about 684,000 students. These charter schools operate in 37 states and are quite geographically dispersed.

Somewhat akin to charter schools, pilot schools have more flexibility than conventional public schools but are staffed from the same pool of teachers. For example, teachers at Boston pilot schools are members of the local teachers' union, but such schools are not obligated to follow union seniority rules in making assignments.

While charter and pilot schools remain under public control (and therefore their students are subject to meeting whatever educational standards the state imposes), public funds also are supporting private sector alternatives, albeit on a much smaller scale. The best-known mechanism is vouchers, by which the government provides tuition money for students to spend at the school of their choice. Only three publicly funded voucher programs currently operate in the United States — serving approximately 25,000 students from Milwaukee, Cleveland, and Florida.[7] Initiated in 1990–91, the Milwaukee program is the oldest and is limited to students from families with incomes no greater than 175 percent of the federal poverty level. The newest program, in Florida, targets students who are disabled or who attend schools that are rated as failing twice in four years. In a pivotal decision issued in June 2002, the U.S. Supreme Court confirmed the constitutionality of Cleveland's decision to allow vouchers to be applied to private schools with a religious affiliation.

In addition to these voucher programs, six states (Minnesota, Illinois, Iowa, Arizona, Florida, and Pennsylvania) offer tax credits for private K–12 school tuition or for contributions to scholarship funds. Florida's corporate income tax credit program alone supports 15,000 scholarship students, with a priority given to children from low-income families.

Choice is less popular in New England than elsewhere in the country. Among the New England states, only Massachusetts is above the national average in the percentage of school districts that allow students to enroll in a public school in another district at no cost. Only Connecticut, Massachusetts, and Rhode Island currently have any publicly funded charter schools in operation. None of the New England states provide for vouchers, although sparsely populated Maine and Vermont offer public money to students who have no school in their districts to enable attendance at an alternate public or non-religious private school.

Choice programs involving charter and private schools are controversial because they divert students and funding away from conventional public schools. Critics are concerned that the most promising students may decide to take advantage of alternatives, leaving the pre-existing public schools with a core of underperforming and unmotivated students. If funding formulas do not adjust properly for student composition, public school systems and the most needy students can be left at a disadvantage. On the other hand, proponents of charters contend that they offer innovative programs. They cite the difficulties of establishing alternative schools: Public funding formulas typically provide operating monies, but no upfront support for capital costs.

Channeling Funding to Poorer Areas

States are continuing to grapple with how to redistribute funds to school districts, such as those serving poor cities, that have a low ability to finance schools on their own. These efforts date back to the 1970s U.S. Supreme Court case of *Rodriguez* v. *San Antonio Independent School District*. The plaintiffs documented that poor school districts could fall far short of matching the school funding provided by nearby wealthy school districts, even if they were willing to levy relatively high property tax rates. However, in its 1973 ruling, the Court held that education is not a fundamental right guaranteed by the U.S. Constitution. This had the effect of leaving school funding decisions to individual states.

Indeed, every state constitution mentions education as a state responsibility, some mandating the provision of "a basic education," "a thorough education," or "an adequate education" for their residents, or, in the case of Massachusetts, requiring the state to "cherish the public schools." Debate over the distribution of school funding has heightened in recent years, as residential segregation between rich and poor has grown and as numerous legal challenges to existing formulas have been mounted.[8]

Nationally, about one-half of K–12 education funding comes from state rather than local governments, although ratios differ considerably from state to state. All states in the nation provide general funding of local education according to a pre-specified formula.[9] One common approach is for the state to specify a "foundation" amount, equal to the minimum required level of spending per student. State aid is set equal to the difference between the foundation amount and the property taxes the jurisdiction could raise were it to apply a state-specified benchmark property tax rate to its actual tax base. In another approach, the state specifies a "guaranteed tax base," which is a hypothetical property value for each community. Localities receive state aid to the extent their actual property tax revenues fall short of what they would collect assuming they had the state-specified hypothetical property tax base. In some cases, state formulas take into account not only differences in property wealth across communities, but also differences in the costs of providing education, which to a large degree reflect differences in the relative difficulty of educating the student populations in different communities.

Whichever approach is taken to setting state aid, the overall extent of redistribution toward property-poor districts depends on the specifics of the program. For example, if the foundation amount or guaranteed tax base is high — or if these parameters are adjusted for individual communities to reflect the extra costs associated with educating students with special learning or transportation needs or a poor home environment — state aid plays a large role in supplementing local resources in property-poor localities. In Massachusetts, state Chapter 70 aid covers more than 90 percent of the local education budgets in cities such as Springfield, New Bedford, and Lawrence.

The treatment of property-rich localities also matters in determining the extent of redistribution and has been a bone of contention in Vermont and New Hampshire. In Vermont, all spending in excess of the foundation level is drawn from a statewide pool funded by property tax revenues generated by localities that impose a property tax rate in excess of the statewide benchmark rate. Thus, a locality that prefers to spend heavily on education — and has the means to do so — keeps only a fraction of the extra revenues it raises from its residents. As a result of the 1997 *Claremont* decision, New Hampshire levies a uniform statewide property tax to fund its obligation to provide an "adequate education." Some of the revenues collected from the wealthiest, "donor" towns go toward supplementing the school budgets of the remaining communities, in effect resulting in negative state aid for property-rich localities. Vermont and New Hampshire policymakers are continuing to consider ways to change these state school funding mechanisms.

Synergistic Approaches to Education Reform

Redistribution of educational funding has been motivated by the compelling logic that schools cannot be effective without adequate funding, and that poor school districts cannot provide adequate funding on their own. Yet, studies of court-mandated state finance reforms are not encouraging on the degree of success achieved to date. For example, a review presented at the Federal Reserve Bank of Boston 2002 annual economic conference indicated that "the types of finance reforms that have been implemented in response to court orders appear to have little, if any, impact on the distribution of student test performance."[10]

The growing realization that "money isn't everything" has provided the impetus for deeper restructuring of public schools. It explains why standards-based reforms and new forms of choice have entered the picture. Under standards-based reforms, states highlight learning objectives, with the intent of inducing schools and school districts to redistribute their available resources in favor of meeting certain performance goals. By fostering school choice, states implicitly provide examples of teaching techniques and resource allocation that are effective, thereby creating pressures for changes in underperforming public schools. While each type of reform is controversial individually, a consensus appears to be developing that effective education reform must be premised on a combination of approaches.

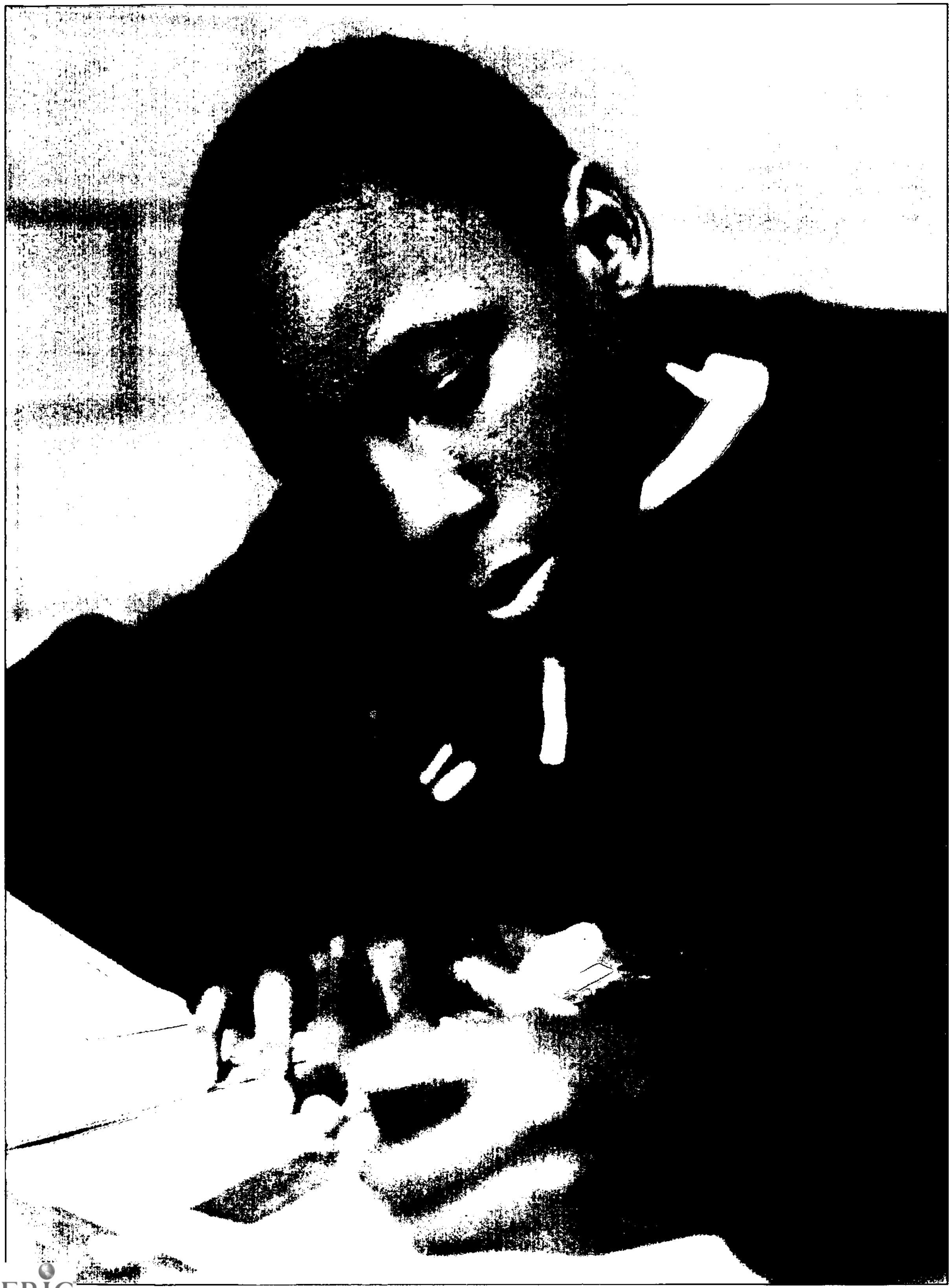
Take school choice, for example. Critics argue that as students opt out of poor-quality schools, such schools are left with an ever more challenging population. The ensuing deterioration in the pupil peer group may induce even more families to leave, resulting in some schools serving "the bottom of the barrel." However, standards-based reforms create a uniform baseline of requirements for all schools, helping to offset the student-sorting implications and the variations in school curriculum caused by choice. Moreover, properly constructed state funding formulas can ensure that the students who remain in such schools have the resources they need.

Conversely, the standards-based approach has weaknesses that choice can help to offset. Critics of standards charge that classroom efforts will be concentrated on the subjects being tested, to the detriment of other important aspects of education. Moreover, some innovative forms of instruction could be stifled, as teachers concentrate on preparing students for the types of questions covered by standardized tests. School choice allows parents to cast a vote in favor of schools that reflect broader educational goals, thereby mitigating some of the incentives schools have to bend their practices toward simply maximizing test scores.

Ongoing Obstacles and Strategies that Work

Will the current wave of education reforms improve learning and result in a higher number of graduates with the basic skills needed for today's knowledge-based economy? Reform advocates throughout the country are pointing to initial signs of success, and statistical studies tying higher standards to rising test scores are beginning to emerge. But a newsletter issued by the Fordham Foundation cautions that even the "poster states" for education have yet to turn any big corners. And only after more years have passed can we expect to see tangible evidence of improvements in workforce quality. We can at least be hopeful that, with so many states hard at work on reforms, successful models will emerge.

Major challenges lie ahead. Complying with the No Child Left Behind Act is arguably the biggest hurdle. All states have filed implementation plans with the U.S. Department of Education, but many details remain to be determined. Even if contentious questions concerning the mix of state and federal funding can be resolved, coordinating state and federal requirements inevitably will lead to tensions. On the one hand, the purpose of introducing standards-based reforms is to assure that all high school graduates have the skills necessary to



The Role of Geography and Demographics

Because states differ in the size, composition, and geographic dispersion of their populations, the kinds of educational challenges that emerge take on different shapes in each state. For example, within the six-state New England region, Connecticut has a large population that is economically and racially diverse and is located in relatively dense tracts of development. In contrast, Vermont's population is comparatively small, homogeneous, and sparsely dispersed across the state.

Education reform in Vermont has involved an aggressively progressive redistribution of school funding. In *Brigham* v. *State of Vermont* (1997) the state Supreme Court found it unfair that communities suffered substantially higher tax burdens for lower-quality schools — in some years the state's contribution to education funding was as low as 20 percent, and amounts raised through local property taxes ranged from zero to 8.2 percent of residents' income. The ensuing legislation, Act 60, focused on alleviating the tax burden of property-poor communities, enabling higher levels of funding with lower tax rates for many districts. In FY1999, the state provided 84 percent of education funding in Vermont. With redistributive funding, new accountability efforts, and no school choice or charter school legislation, education reform in Vermont is focused on ...alizing the system's disparate parts.

	Connecticut		Vermont	
	Value	Rank	Value	Rank
Total population	3,405,565	29	608,827	49
White share of population	81.6%	26	96.8%	2
Per capita income	$28,766	1	$20,625	26
Per capita income in largest city	$16,306	—	$19,011	—
Population per acre	1,066	4[a]	99	30[a]
Developed acres per total acres	27.4%	3[a]	5.2%	27[a]

[a]Alaska and District of Columbia excluded.
Source: U.S.Census Bureau, USDA Natural Resources Conservation Service.

In contrast, in Connecticut, a more densely and contiguously populated state, decision-makers have viewed the problem more as one of where to draw the district lines. Since poorly funded urban schools existed quite near better-funded, higher-quality suburban schools, Connecticut's landmark *Sheff* v. *O'Neill* case (1996) focused on the problem of racial and economic segregation in Hartford schools that was the result of arbitrary district lines. Students in Hartford, which is 79 percent black or Hispanic and has a per capita income of just $13,428, were isolated from students in neighboring West Hartford, which is 11 percent black or Hispanic and has a per capita income of $33,468. While increased state aid to less-wealthy districts has been an element of Connecticut's reforms since 1996, more emphasis has been placed on desegregation and increased variety in the types of public schools available, rather than on inequitable tax burdens. Today, about 10 percent of Hartford students take advantage of special programs designed to facilitate student mixing — interdistrict magnet schools, the Open Choice option that allows cross-district matriculation, and cooperative extracurricular programming. A January 2003 *Sheff* settlement aims to push this percentage up to 30 percent, with the creation of eight new interdistrict magnet schools and increased funding for choice programs. In a marked contrast to Vermont's equalizing reform paradigm, Connecticut has chosen an increased-choices reform paradigm.

participate in the twenty-first century workforce or to advance beyond high school. This motivation argues for setting high standards. On the other hand, states inevitably will feel pressure to have their public schools perform well according to the federal government criteria — a pressure that may tempt some to lower the bar.

Providing extra help for students who have difficulty meeting the new educational requirements will be a challenge. Without the benefit of effective support networks in schools, higher standards could actually serve to increase high school dropout rates, resulting in less-well-educated students — the exact opposite of the intended effect. In Massachusetts, the threat of high rates of failure on the MCAS — and the potential for large numbers of students to be denied diplomas — has mobilized entire communities. The state has provided retest opportunities and funding for enhanced after-school and summer remedial programs.

In Boston, under the leadership of the Private Industry Council (PIC), the private sector has begun providing students in its summer-jobs program with 90 minutes of language-arts and mathematics instruction daily. In the past several summers, this intervention has raised the English language proficiency of participating students by about two grades over the course of the summer. For the class of 2003 — the first high-stakes graduating class — PIC operated summer and fall programs focused on getting students who had failed the MCAS repeatedly up and over the MCAS bar. About 70 percent of the students participating in these programs passed one or both parts of the MCAS for the first time.

The successful partnership between PIC and the Boston public schools will continue, but other strategies also need to be explored, and efforts to improve student performance need to be expanded to reach more locations. An independent nonprofit organization called Mass Insight Education — supported by outside education specialists, academics, and representatives of the Federal Reserve Bank of Boston — has launched a research project at the state's three largest school systems evaluating remediation strategies for high school students who are at risk of not passing the MCAS. By investigating the experiences of successive high school classes in Boston, Springfield, and Worcester, the study seeks to uncover which school, community, and peer efforts form the most valuable interventions and deserve more attention in the future.[11]

Unfortunately, these education challenges are taking place against a backdrop of fiscal stresses at the state and local levels. Many states face serious budget deficits in the current and following fiscal years. How to provide adequate funding for reforms during the ongoing budget crisis and how to ensure an enduring structure for the long term are likely to be major concerns for the foreseeable future.

Some budgetary cutbacks that seem peripheral at first glance may actually interfere with core education reform strategies. For example, some school districts are reducing offerings of special subjects such as music, art, and physical education. In addition to the broad education these classes provide to students, they allow time for teachers of subjects such as math and English to meet regularly during the school day to plan instruction and examine student progress.

Over the longer term, ongoing education reforms may increase funding requirements at the college and university level. If more students are prepared for college as a result of restructuring in elementary and secondary schools, how will the states assure an expanded and steady stream of support for higher education? In the throes of the current fiscal crisis, states generally have targeted public higher education for less funding, not more.

Even as education reforms solidify in many K–12 school systems, there is growing recognition that policy changes need to be more fully reflected in classroom practices. A recent book by University of Michigan researchers David K. Cohen and Heather C. Hill is illustrative.[12] Cohen and Hill studied California's decade-long effort to improve mathematics learning. They concluded that students achieved higher scores on state math tests

only when teachers had substantial opportunities to learn the practices proposed by the revised curriculum guidelines. In addition to improving their understanding of new standards and how to implement them, teachers need to receive meaningful feedback from testing programs. They must be able to obtain student test scores in a timely manner and have access to professional development opportunities and resources to help students improve.

Producing well-educated adults is a complex undertaking. Schools matter, but so do families and neighborhoods. Education reforms need to be coordinated with broader economic development programs. Particularly in the case of poor cities, even greater public funding for preschool, after-school, and summer programs may be necessary to supplement efforts being made within the existing K–12 system during the regular school schedule. More generally, many students and residents are doubtful about the value of their local schools. Turning around this mind-set is a huge task that must be addressed. It will require the involvement of people and institutions outside the educational establishment.

* * *

In New England and throughout the nation, states and localities have been implementing education reforms for some time now. They are deep in the throes of seeking to educate a student body that is less uniformily "education-ready" than 30 years ago and to educate these students to a higher standard than before. States and localities face many obstacles that make this a daunting task, but their commitment to success is impressive, and they have made progress. We applaud the education efforts taking place in New England and elsewhere, and we look forward to reaping the economic and social benefits that accrue with a better-educated citizenry.

Endnotes

1 Murnane, Richard J. and Frank Levy. 1996. *Teaching the New Basic Skills: Principles for Educating Children to Thrive in a Changing Economy.* New York: Martin Kessler Books, The Free Press.

2 NAEP is a congressionally mandated project of the National Center for Education Statistics, a division of the U.S. Department of Education. The assessments have been conducted regularly since 1969 and represent the only nationally representative, continuing evaluation of U.S. students' knowledge in various subject areas. Nearly 100,000 students in 2,000 schools are tested in each administration of NAEP. A board appointed by the U.S. Secretary of Education is responsible for selecting the subject areas to be assessed; for setting appropriate student performance levels; for developing assessment objectives and test specifications through a national consensus approach; and for other aspects of designing and evaluating the tests and disseminating the results.

3 For statistics on the gaps between groups, see the paper by Yolanda K. Kodrzycki in the Federal Reserve Bank of Boston conference volume, *Education in the 21st Century: Meeting the Challenges of a Changing World,* edited by Yolanda K. Kodrzycki (2002).

4 These statistics on college enrollment and completion rates are drawn from Sarah E. Turner, "Going to College and Finishing College: Explaining Different Educational Outcomes," in *College Choices: The Economics of Which College, When College, and How to Pay For It,* edited by Caroline M. Hoxby, forthcoming from the University of Chicago Press.

5 For more discussion, see the paper by Eric A. Hanushek and Margaret E. Raymond, and the commentary by Thomas Kane, in the Federal Reserve Bank of Boston conference volume on education (2002).

6 Choice became particularly controversial when educators began confronting segregation in the 1950s through the 1970s. The 1954 Supreme Court case of *Brown v. Board of Education* disallowed school assignment by race, but did little to affect voluntary segregation, which was already widespread. The 1968 *Green v. County Board of New Kent County* case went further and required mixing, which in many districts meant decreased choice, forcing students to attend racially mixed schools to which they were assigned.

7 Some private foundations also have provided vouchers for students of particular schools or school systems.

8 As a further source of information, see the series of articles concerning state education funding controversies that appeared in the Federal Reserve Bank of Boston publication *New England Fiscal Facts* between 1999 and 2002.

9 In most states with general school aid, funds are also earmarked for specific purposes mandated by state governments, such as bilingual, vocational, early childhood, and special education programs; food programs; student transportation; capital outlays; technology investments; and teachers' retirement and other benefits.

10 See the paper by Thomas A. Downes in the Federal Reserve Bank of Boston conference volume on education (2002).

11 With about 63,000 students, Boston is by far the largest school district in New England. Springfield, Worcester, and Providence, RI, each have about 26,000 to 27,000 public school students. Three school districts in Connecticut—Bridgeport, Hartford, and New Haven — each have on the order of 20,000 students enrolled.

Learning Policy: When State Education Reform Works, New Haven: Yale University Press, 2002.

2002 bank highlights

Economic Research and Monetary Policy

The Bank's Research function supports the President and Board of Directors of the Bank in their monetary policy-making roles. Economists conduct policy-oriented research aimed at achieving a better understanding of the links between monetary policy actions and economic activity; they also conduct applied microeconomic research that focuses on regional economic and fiscal issues. Much of the work of Research staff is made available to the public in print and on the web. Research staff also provide objective economic expertise to the public in a variety of government, academic, and business settings.

The year 2002 provided numerous challenges for monetary policy economists. The economy continued its gradual, modest recovery, but the course of growth was unusually difficult to predict. A combination of car-happy consumers and increasingly efficient firms yielded strong consumer spending but mediocre investment spending and stagnant employment. While the long-run underpinnings of the economy remained sound, uncertainty about geopolitical events and concerns about the tepid recovery tempered consumers' and businesses' spending plans. The Federal Open Market Committee (FOMC) held the federal funds rate at 40-year lows through most of the year, and voted to reduce the policy rate by an additional 50 basis points at its November meeting.

The Bank's economists contributed to macroeconomic research on a variety of fronts: seeking to explain the widely noted decline in the volatility of GDP growth; estimating the extent to which consumers and businesses look ahead in making consumption and investment decisions; and determining the impact of joining a currency union on the volume of trade and the co-movement of prices and GDP between countries that share a common currency.

Work of the Bank's regional economists included a comprehensive study of the 50 states' need for revenues and ability to raise revenues; a study of the effect of the loss of a spouse, through death or divorce, on family income; and a study examining how widely shared across race and gender is the wage premium that accrues to those with higher education.

It was another successful year for the seminar series of the New England Study Group, organized to foster interactions between Bank economists and outside economists and development practitioners. There were ten NESG sessions on topics ranging from sprawl to Native American economic development.

With the sluggish recovery in the national economy, the insights of the Bank's regional economists were much in demand, and economists made presentations on economic and fiscal issues frequently throughout the First District.

The Bank's 47th economic conference, "Education in the 21st Century: Meeting the Challenges of a Changing World," held in June 2002, provided a forum for analyzing the effectiveness of recent efforts to reform elementary and secondary education. The 48th conference, scheduled for June 2003, will focus on behavioral economics: "How Humans Behave: Implications for Economics and Economic Policy."

The *Regional Review*, which takes a nontechnical approach to economics topics, included an article by former Fed Governor Alice Rivlin on the dilemmas facing capitalist economies in providing the fruits of rapid growth to more than just "the educated, the skilled, and the lucky." *New England Fiscal Facts* featured the last of three articles analyzing school funding concerns in New Hampshire.

Supervision and Regulation

The Bank's Supervision and Regulation function is responsible for periodic examinations of New England banking institutions, ongoing monitoring of banking conditions, and enforcement of regulatory measures. Supervision and Regulation staff also contribute to the development of supervisory and regulatory policy at the national and international levels and monitor major developments affecting nonbank financial institutions.

New England's banks remained healthy in 2002, but strains were evident. Like their counterparts nationwide, New England's largest banking organizations saw their earnings adversely affected by soft loan demand, an increase in problem loans, especially in telecommunications and energy, and losses from international operations. New England's regional and community banks, while not experiencing significant credit quality problems, were challenged by a low interest rate environment and reduced loan demand that placed pressure on their earnings. The Bank's Supervision and Regulation staff closely monitored these emerging concerns, focusing resources on the effectiveness of banks' risk management activities in the affected areas.

Supervision and Regulation staff reallocated resources to meet the requirements of the USA Patriot Act, which places renewed emphasis on anti-money-laundering efforts of regulated institutions.

Working with staff from the Federal Reserve Board, the Bank's Supervision and Regulation staff played a prominent role in the development of the Basel Committee's approach to establishing bank capital requirements for operational risk. Staff conducted quantitative analyses in support of the Basel group's risk management subcommittee and worked to align the current operational risk capital proposal with the "real world" experience of the banking community. The department also participated in a cross-institutional benchmarking project that will help finalize the credit risk aspect of the proposed Basel accord.

Supervision and Regulation staff held several regional conferences in 2002. A Regional and Community Bankers Conference in June featured topics ranging from regional economic conditions, credit trends, and emerging supervisory issues to a discussion of Federal Reserve supervisory approaches. In October, an Accounting Roundtable for Chief Financial Officers and Accountants discussed legislative responses to public accounting issues. In November, Supervision and Regulation's Insurance Knowledge Center hosted its second annual conference for state and federal bank and insurance regulatory agencies. The conference focused on the use of insurance products to manage the risks inherent in banking operations and the issues associated with the sale of insurance as a business line.

Public and Community Affairs

The Bank's Public and Community Affairs function serves the public by providing technical advice, consumer information, and educational resources directed toward promoting (1) economic and financial understanding, and (2) broader access to credit and economic development opportunities.

In 2002, the Bank helped the New England Council establish a Creative Economy Council to highlight the economic contributions of creative industries, including the performing and visual arts; graphic design, architecture, and other applied arts; the media; and heritage and preservation organizations. The Creative Economy Council will serve as a forum for discussion and learning about these industries and will work collaboratively with other groups on development initiatives involving creative industries.

The Bank produced and distributed the publication, "Faith-Based Community Economic Development Principles and Practices," to assist faith-based organizations in fostering economic development in their communities. The publication proved popular, and the Bank undertook a second printing.

The Bank collaborated with the Federal Deposit Insurance Corporation, Action for Boston Community Development, and the Pioneer Institute in sponsoring conferences on ways to bring underserved communities and population groups into the economic mainstream.

Communities and Banking, the Bank's magazine on community development and credit issues, included articles on the expanding involvement of social investors in community economic development, sources of venture capital for small firms, manufactured housing, and mortgage scoring.

Late in 2002, the Bank introduced a brochure on identity theft to complement an existing video on this subject. The new brochure met with immediate success.

As part of the City of Boston's Earned Income Tax Credit Initiative, Bank staff provided free tax preparation services to Boston's low- and moderate-income populations.

"Classroom in the Workplace," a program initiated in 1999 to provide reading instruction to the Bank's summer interns, was expanded in 2002 to 20 companies and over 200 students. Math instruction was added to the program.

For the seventh consecutive year, the Bank operated the "Fed Challenge," an economic competition in which high school students simulate the roles of Federal Reserve monetary policy makers. The Bank also introduced with considerable success a noncompetitive, in-school version of Fed Challenge.

Financial Services

The Bank's Financial Services function serves the public by providing payments services, including check processing, cash, and electronic funds transfers, to New England banks and to the U.S. Treasury. In addition to serving New England, the Bank provides certain payments and support services to financial institutions in other sections of the country, and one of the Bank's major responsibilities is to lead the Federal Reserve System's payments policy-making arm, the Financial Services Policy Committee.

In 2002, the Financial Services Policy Committee (FSPC) simultaneously made decisions to invest in its electronic payments services and to standardize, consolidate, and downsize its check-processing infrastructure. The decisions recognize that the retail payments system is in transition from a predominantly check-based system to electronic payments. The FSPC and the Boston Fed have promoted this move to electronic payments through a variety of initiatives for a number of years and fully support this market change.

A major System initiative, FedLine for the Web, became a reality for many Federal Reserve System customer banks in 2002. FedLine for the Web gives financial institutions web access to information and transactions services. Over the course of the year, the Bank held seminars throughout New England, and by the end of the year, a majority of Boston Fed customers had access to one or more of the check, ACH accounting, billing, and other services available through FedLine for the Web.

The System continued to develop its image-based services for check processing. FedImage Services, managed by the Boston Fed on behalf of the Federal Reserve System, implemented shared national image archives at two Reserve Bank sites, replaced older systems with a new standard check image capture system at 24 Reserve offices, and provided services to more than 300 customers as of yearend.

In wholesale payments (Fedwire funds and securities transfers), the Bank successfully completed the consolidation of online support for customer banks in five additional Federal Reserve districts and joint custody collateral support for all banks nationwide. Following this consolidation, the Boston Fed became the primary wholesale services provider for banks in half the country, as well as the System's sole provider of joint custody collateral services.

Boston Fed responsibilities on behalf of the Federal Reserve System include services in support of U.S. Treasury payments. In 2002, the Bank assumed expanded responsibility for stored value card payments for military personnel; managed development of a web-based pilot system for vendor payments and intragovernmental payments; and provided technical support for the Federal Reserve System's Treasury Direct Call Center, located in three Federal Reserve Banks, including Boston. The Treasury Direct Call Center enables consumers to make direct purchases of U.S. government obligations.

Locally, in check services, the Bank began converting to the new standard automation platform for check processing. High levels of customer service were maintained throughout the con-

33

version process, which is expected to be completed in 2003. In cash services, the Bank led a Federal Reserve System work group that developed, tested, and implemented a more efficient method for processing $1 notes. As a result of these efforts, in 2003 and 2004 the Bank will introduce System-wide procedural efficiencies that will reduce cash processing costs for the System.

2002 Boston Fed Financial Services Activity

	Daily Dollar Value (in thousands)	Daily Average Volume	Volume Growth 2002 vs. 2001
Commercial Check Processing			
Processed Volume	$3,900,000	4,100,000 checks	–6.4%
Fine Sort Volume	$228,400	300,000 checks	–11.3%
Processed Returns	$50,700	44,400 checks	–7.8%
Total Volume	$4,200,000	4,400,000 checks	–6.8%
Automated Clearing House	$1,770,000	1,072,254 items	8.5%
Funds Transfers[1]	$1,877,000	405,955 transfers	—
Book Entry Securities Transfers[1]	$1,366,800	99,557 transfers	—
Cash Operations			
Total Notes Paid	$126,200	8,300,000 notes	–3.3%
Total Notes Received from Circulation	$117,800	8,200,000 notes	–0.2%
High Speed Currency Processed	NA	8,600,000 notes	0.2%

[1] Boston provides operational support for funds and securities transfers for the depository institutions in six Federal Reserve Districts. Consolidation of these services took place over a period from September 2001 through May 2002; as a result, year-over-year growth comparisons are not meaningful.

toys for tots

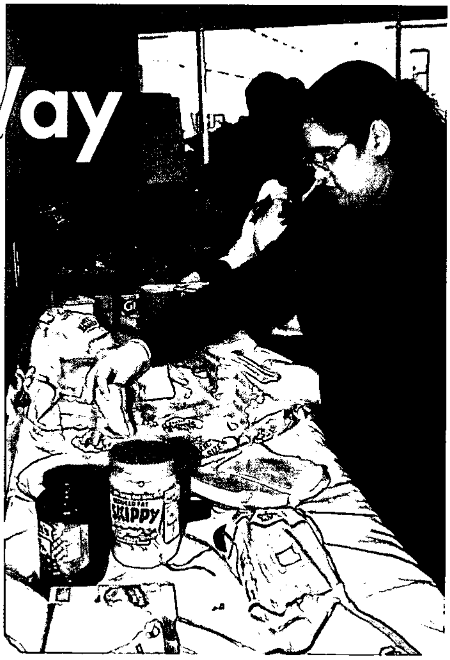
community care day

homeless children's holiday party

Books and Kids Program

Project ProTech

United Way



boston summer jobs program

BOSTON PRIVATE INDUSTRY COUNCIL

dearborn middle school mentoring program

classroom at the workplace

boston after school jobs program

job shadow da

school-to-career project

Workforce Development

south boston high school partnership

1,322 employees

working together

with the public

to make a difference

BEST COPY AVAILABLE


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Photo on opposite page
Seated: Cathy E. Minehan and William O. Taylor
Standing: Paul M. Connolly and James J. Norton

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Alan Wilson
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James Brett (Advisor)
President and Chief Executive Officer
The New England Council

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Third row: P. Chase, J. Brett, A. Dolphin
Fourth row: J. Morison III, G. Shuster, R. Dickinson

41

community development advisory council

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Second row: M. Shields, F. Fowler, G. Lee
Third row: M. Weekes
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(Chairman)
Vice President
Federal Reserve Bank of Boston

Marilyn Weekes
Assistant Vice President
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Federal Reserve Bank of Boston

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Paul Douglas
Executive Director
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Redevelopment Authority

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Grant Lee
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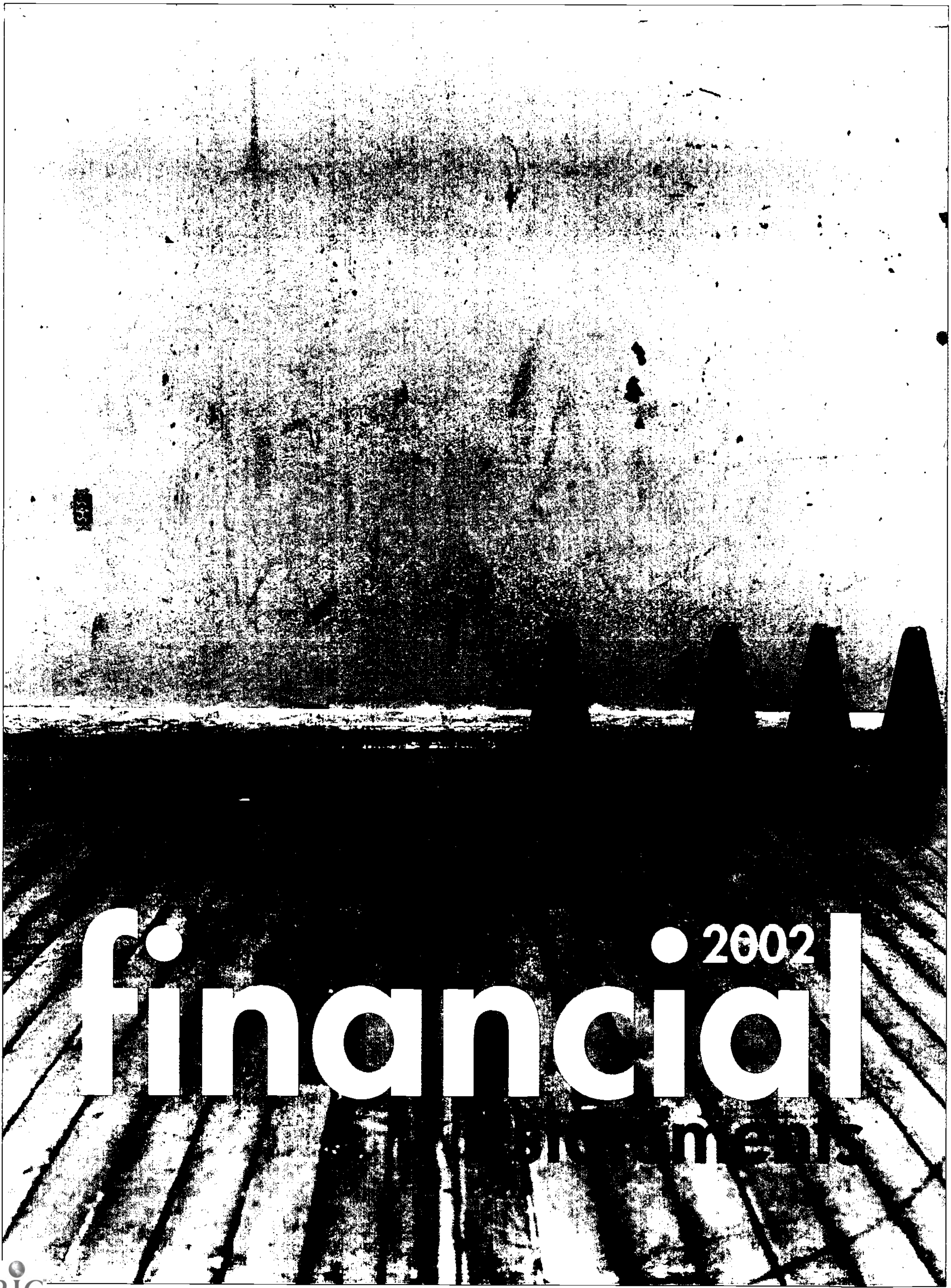
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financial

FEDERAL RESERVE BANK OF BOSTON

P.O. BOX 2076
BOSTON, MASSACHUSETTS 02106-2076

January 31, 2003

To the Board of Directors,

The management of the Federal Reserve Bank of Boston ("FRB Boston") is responsible for the preparation and fair presentation of the Statement of Financial Condition, Statement of Income, and Statement of Changes in Capital as of December 31, 2002 (the "Financial Statements"). The Financial Statements have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System and as set forth in the Financial Accounting Manual for the Federal Reserve Banks ("Manual"), and as such, include amounts, some of which are based on judgments and estimates of management. To our knowledge, the Financial Statements are, in all material respects, fairly presented in conformity with the accounting principles, policies and practices documented in the Manual and include all disclosures necessary for such fair presentation.

The management of the FRB Boston is responsible for maintaining an effective process of internal controls over financial reporting, including the safeguarding of assets as they relate to the Financial Statements. Such internal controls are designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation of reliable Financial Statements. This process of internal controls contains self-monitoring mechanisms,including, but not limited to, divisions of responsibility and a code of conduct. Once identified, any material deficiencies in the process of internal controls are reported to management, and appropriate corrective measures are implemented.

Even an effective process of internal controls, no matter how well designed, has inherent limitations, including the possibility of human error, and therefore can provide only reasonable assurance with respect to the preparation of reliable financial statements.

The management of the FRB Boston assessed its process of internal controls over financial reporting including the safeguarding of assets reflected in the Financial Statements, based upon the criteria established in the "Internal Control–Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, we believe that the FRB Boston maintained an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements.

Federal Reserve Bank of Boston

Cathy E. Minehan

Paul M. Connolly

Robert K. LaRocca

Cathy E. Minehan, President	Paul M. Connolly, First Vice President	Robert K. LaRocca, Principal Financial Officer

report of independent accountants

PRICEWATERHOUSECOOPERS

To the Board of Governors of the Federal Reserve System
and the Board of Directors of the Federal Reserve Bank of Boston

We have audited the accompanying statements of condition of the Federal Reserve Bank of Boston (the Bank) as of December 31, 2002 and 2001, and the related statements of income and changes in capital for the years then ended. These financial statements are the responsibility of the Bank's management. Our responsibility is to express an opinion on the financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 3, the financial statements were prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System. These principles, policies, and practices, which were designed to meet the specialized accounting and reporting needs of the Federal Reserve System, are set forth in the "Financial Accounting Manual for Federal Reserve Banks" and constitute a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Bank as of December 31, 2002 and 2001, and results of its operations for the years then ended, on the basis of accounting described in Note 3.

PricewaterhouseCoopers LLP

March 3, 2003
Boston, Massachusetts

PRICEWATERHOUSECOOPERS

To the Board of Directors of the
Federal Reserve Bank of Boston

We have examined management's assertion that the Federal Reserve Bank of Boston (FRB of Boston) maintained effective internal control over financial reporting and the safeguarding of assets as they relate to the financial statements as of December 31, 2002, based on criteria described in "Internal Control–Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission included in the accompanying Management's Assertion. FRB of Boston's management is responsible for maintaining effective internal control over financial reporting and the safeguarding of assets as they relate to the financial statements. Our responsibility is to express an opinion on the assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and, accordingly, included obtaining an understanding of the internal control over financial reporting, testing, and evaluating the design and operating effectiveness of the internal control, and such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

Because of inherent limitations in any internal control, misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal control over financial reporting to future periods are subject to the risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assertion that the FRB of Boston maintained effective internal control over financial reporting and over the safeguarding of assets as they relate to the financial statements as of December 31, 2002, is fairly stated, in all material respects, based on criteria described in "Internal Control–Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission.

PricewaterhouseCoopers LLP

March 3, 2003
Boston, Massachusetts

statements of condition

as of December 31, 2002 and 2001
(in millions)

	2002	2001
Assets		
Gold certificates	$533	$546
Special drawing rights certificates	115	115
Coin	45	54
Items in process of collection	1,002	317
Loans to depository institutions	–	2
U.S. government and federal agency securities, net	36,618	33,748
Investments denominated in foreign currencies	964	757
Accrued interest receivable	312	343
Bank premises and equipment, net	111	112
Other assets	25	33
Total assets	$39,725	$36,027
Liabilities and Capital		
Liabilities:		
Federal Reserve notes outstanding, net	$28,905	$31,806
Securities sold under agreements to repurchase	1,208	–
Deposits:		
Depository institutions	1,212	626
Other deposits	3	5
Deferred credit items	832	283
Interest on Federal Reserve notes due U.S. Treasury	60	37
Interdistrict settlement account	6,558	2,362
Accrued benefit costs	64	62
Other liabilities	11	10
Total liabilities	$38,853	$35,191
Capital:		
Capital paid-in	436	418
Surplus	436	418
Total capital	872	836
Total liabilities and capital	$39,725	$36,027

The accompanying notes are an integral part of these financial statements.

statements of income

for the years ended December 31, 2002 and 2001
(in millions)

	2002	2001
Interest income:		
Interest on U.S. government and federal agency securities	$1,459	$1,752
Interest on investments denominated in foreign currencies	15	17
Interest on loans to depository institutions	–	1
Total interest income	1,474	1,770
Interest expense:		
Interest expense on securities sold under agreements to repurchase	1	–
Net interest income	1,473	1,770
Other operating income:		
Income from services	54	57
Reimbursable services to government agencies	25	23
Foreign currency gains (losses), net	120	(73)
U.S. government securities gains, net	5	18
Other income	13	15
Total other operating income	217	40
Operating expenses:		
Salaries and other benefits	100	94
Occupancy expense	14	14
Equipment expense	15	13
Assessments by Board of Governors	34	35
Other expenses	49	50
Total operating expenses	212	206
Net income prior to distribution	$1,478	$1,604
Distribution of net income:		
Dividends paid to member banks	$26	$25
Transferred to surplus	18	60
Payments to U.S. Treasury as interest on Federal Reserve notes	1,434	1,519
Total distribution	$1,478	$1,604

The accompanying notes are an integral part of these financial statements.

statements of changes in capital

for the years ended December 31, 2002 and 2001
(in millions)

	Capital Paid-in	Surplus	Total Capital
Balance at January 1, 2001			
(7.1 million shares)	$358	$358	$716
Net income transferred to surplus	–	60	60
Net change in capital stock issued			
(1.2 million shares)	60	–	60
Balance at December 31, 2001			
(8.3 million shares)	418	418	836
Net income transferred to surplus	–	18	18
Net change in capital stock issued			
(0.4 million shares)	18	–	18
Balance at December 31, 2002			
(8.7 million shares)	$436	$436	$872

The accompanying notes are an integral part of these financial statements.

1. Structure

The Federal Reserve Bank of Boston ("Bank") is part of the Federal Reserve System ("System") created by Congress under the Federal Reserve Act of 1913 ("Federal Reserve Act") which established the central bank of the United States. The System consists of the Board of Governors of the Federal Reserve System ("Board of Governors") and twelve Federal Reserve Banks ("Reserve Banks"). The Reserve Banks are chartered by the federal government and possess a unique set of governmental, corporate, and central bank characteristics. The Bank serves the First Federal Reserve District, which includes Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and a portion of Connecticut. Other major elements of the System are the Federal Open Market Committee ("FOMC") and the Federal Advisory Council. The FOMC is composed of members of the Board of Governors, the president of the Federal Reserve Bank of New York ("FRBNY") and, on a rotating basis, four other Reserve Bank presidents. Banks that are members of the System include all national banks and any state-chartered bank that applies and is approved for membership in the System.

Board of Directors

In accordance with the Federal Reserve Act, supervision and control of the Bank are exercised by a Board of Directors. The Federal Reserve Act specifies the composition of the Board of Directors for each of the Reserve Banks. Each board is composed of nine members serving three-year terms: Three directors, including those designated as Chairman and Deputy Chairman, are appointed by the Board of Governors, and six directors are elected by member banks. Of the six elected by member banks, three represent the public and three represent member banks. Member banks are divided into three classes according to size. Member banks in each class elect one director representing member banks and one representing the public. In any election of directors, each member bank receives one vote, regardless of the number of shares of Reserve Bank stock it holds.

2. Operations and Services

The System performs a variety of services and operations. Functions include formulating and conducting monetary policy; participating actively in the payments mechanism, including large-dollar transfers of funds, automated clearinghouse ("ACH") operations, and check processing; distributing coin and currency; performing fiscal agency functions for the U.S. Treasury and certain federal agencies; serving as the federal government's bank; providing short-term loans to depository institutions; serving the consumer and the community by providing educational materials and information regarding consumer laws; supervising bank holding companies and state member banks; and administering other regulations of the Board of Governors. The Board of Governors' operating costs are funded through assessments on the Reserve Banks.

The FOMC establishes policy regarding open market operations, oversees these operations, and issues authorizations and directives to the FRBNY for its execution of transactions. Authorized transaction types include direct purchase and sale of securities, matched sale–purchase transactions, the purchase of securities under agreements to resell, the sale of securities under agreements to repurchase, and the lending of U.S. government securities. The FRBNY is also authorized by the FOMC to hold balances of, and to execute spot and forward foreign exchange ("F/X") and securities contracts in, nine foreign currencies, maintain reciprocal currency arrangements ("F/X swaps") with various central banks, and "warehouse" foreign currencies for the U.S. Treasury and Exchange Stabilization Fund ("ESF") through the Reserve Banks.

3. Significant Accounting Policies

Accounting principles for entities with the unique powers and responsibilities of the nation's central bank have not been formulated by the Financial Accounting Standards Board. The Board of Governors has

developed specialized accounting principles and practices that it believes are appropriate for the significantly different nature and functions of a central bank as compared to the private sector. These accounting principles and practices are documented in the Financial Accounting Manual for Federal Reserve Banks ("Financial Accounting Manual"), which is issued by the Board of Governors. All Reserve Banks are required to adopt and apply accounting policies and practices that are consistent with the Financial Accounting Manual.

The financial statements have been prepared in accordance with the Financial Accounting Manual. Differences exist between the accounting principles and practices of the System and accounting principles generally accepted in the United States of America ("GAAP"). The primary differences are the presentation of all security holdings at amortized cost, rather than at the fair value presentation requirements of GAAP, and the accounting for matched sale–purchase transactions as separate sales and purchases, rather than secured borrowings with pledged collateral, as is generally required by GAAP. In addition, the Bank has elected not to present a Statement of Cash Flows. The Statement of Cash Flows has not been included as the liquidity and cash position of the Bank are not of primary concern to the users of these financial statements. Other information regarding the Bank's activities is provided in, or may be derived from, the Statements of Condition, Income, and Changes in Capital. Therefore, a Statement of Cash Flows would not provide any additional useful information. There are no other significant differences between the policies outlined in the Financial Accounting Manual and GAAP.

Effective January 2001, the System implemented procedures to eliminate the sharing of costs by Reserve Banks for certain services a Reserve Bank may provide on behalf of the System. Major services provided for the System by the Bank, for which the costs will not be redistributed to the other Reserve Banks, include Internet and Directory Services, Government Image Archive, Image Services System, Financial Support Office, Financial Services Policy Committee, Integrated Accounting System, Account Management Information System, and System Purchasing Service.

The preparation of the financial statements in conformity with the Financial Accounting Manual requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. Certain amounts relating to prior years have been reclassified to conform to the current-year presentation. Unique accounts and significant accounting policies are explained below.

a. Gold Certificates

The Secretary of the Treasury is authorized to issue gold certificates to the Reserve Banks to monetize gold held by the U.S. Treasury. Payment for the gold certificates by the Reserve Banks is made by crediting equivalent amounts in dollars into the account established for the U.S. Treasury. These gold certificates held by the Reserve Banks are required to be backed by the gold of the U.S. Treasury. The U.S. Treasury may reacquire the gold certificates at any time and the Reserve Banks must deliver them to the U.S. Treasury. At such time, the U.S. Treasury's account is charged and the Reserve Banks' gold certificate accounts are lowered. The value of gold for purposes of backing the gold certificates is set by law at $42 2/9 a fine troy ounce. The Board of Governors allocates the gold certificates among Reserve Banks once a year based upon average Federal Reserve notes outstanding in each District.

b. Special Drawing Rights Certificates

Special drawing rights ("SDRs") are issued by the International Monetary Fund ("Fund") to its members in proportion to each member's quota in the Fund at the time of issuance. SDRs serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for United States participation in the SDR system, the Secretary of the U.S. Treasury is authorized to issue SDR certificates, somewhat like gold certificates, to the Reserve Banks. At such time,

equivalent amounts in dollars are credited to the account established for the U.S. Treasury, and the Reserve Banks' SDR certificate accounts are increased. The Reserve Banks are required to purchase SDRs, at the direction of the U.S. Treasury, for the purpose of financing SDR certificate acquisitions or for financing exchange stabilization operations. At the time SDR transactions occur, the Board of Governors allocates SDR certificate transactions among Reserve Banks based upon Federal Reserve notes outstanding in each District at the end of the preceding year. There were no SDR transactions in 2002.

c. Loans to Depository Institutions

The Depository Institutions Deregulation and Monetary Control Act of 1980 provides that all depository institutions that maintain reservable transaction accounts or nonpersonal time deposits, as defined in Regulation D issued by the Board of Governors, have borrowing privileges at the discretion of the Reserve Banks. Borrowers execute certain lending agreements and deposit sufficient collateral before credit is extended. Loans are evaluated for collectibility, and currently all are considered collectible and fully collateralized. If loans were ever deemed to be uncollectible, an appropriate reserve would be established. Interest is accrued using the applicable discount rate established at least every fourteen days by the Boards of Directors of the Reserve Banks, subject to review by the Board of Governors. Reserve Banks retain the option to impose a surcharge above the basic rate in certain circumstances.

d. U.S. Government and Federal Agency Securities and Investments Denominated in Foreign Currencies

The FOMC has designated the FRBNY to execute open market transactions on its behalf and to hold the resulting securities in the portfolio known as the System Open Market Account ("SOMA"). In addition to authorizing and directing operations in the domestic securities market, the FOMC authorizes and directs the FRBNY to execute operations in foreign markets for major currencies in order to counter disorderly conditions in exchange markets or to meet other needs specified by the FOMC in carrying out the System's central bank responsibilities. Such authorizations are reviewed and approved annually by the FOMC.

In December 2002, the FRBNY replaced matched sale–purchase ("MSP") transactions with securities sold under agreements to repurchase. MSP transactions, accounted for as separate sale and purchase transactions, are transactions in which the FRBNY sells a security and buys it back at the rate specified at the commencement of the transaction. Securities sold under agreements to repurchase are treated as secured borrowing transactions with the associated interest expense recognized over the life of the transaction.

The FRBNY has sole authorization by the FOMC to lend U.S. government securities held in the SOMA to U.S. government securities dealers and to banks participating in U.S. government securities clearing arrangements on behalf of the System, in order to facilitate the effective functioning of the domestic securities market. These securities-lending transactions are fully collateralized by other U.S. government securities. FOMC policy requires FRBNY to take possession of collateral in excess of the market values of the securities loaned. The market values of the collateral and the securities loaned are monitored by FRBNY on a daily basis, with additional collateral obtained as necessary. The securities loaned continue to be accounted for in the SOMA.

F/X contracts are contractual agreements between two parties to exchange specified currencies, at a specified price, on a specified date. Spot foreign contracts normally settle two days after the trade date, whereas the settlement date on forward contracts is negotiated between the contracting parties, but will extend beyond two days from the trade date. The FRBNY generally enters into spot contracts, with any forward contracts generally limited to the second leg of a swap/warehousing transaction.

The FRBNY, on behalf of the Reserve Banks, maintains renewable, short-term F/X swap arrangements with two authorized foreign central banks. The parties agree to exchange their currencies up to a prearranged maximum amount and for an agreed upon period of time (up to twelve months), at an agreed-upon interest rate. These arrangements give the FOMC temporary access to foreign currencies that it may need for intervention operations to support the dollar and give the partner foreign central bank temporary access

to dollars it may need to support its own currency. Drawings under the F/X swap arrangements can be initiated by either the FRBNY or the partner foreign central bank, and must be agreed to by the drawee. The F/X swaps are structured so that the party initiating the transaction (the drawer) bears the exchange rate risk upon maturity. The FRBNY will generally invest the foreign currency received under an F/X swap in interest-bearing instruments.

Warehousing is an arrangement under which the FOMC agrees to exchange, at the request of the Treasury, U.S. dollars for foreign currencies held by the Treasury or ESF over a limited period of time. The purpose of the warehousing facility is to supplement the U.S. dollar resources of the Treasury and ESF for financing purchases of foreign currencies and related international operations.

In connection with its foreign currency activities, the FRBNY, on behalf of the Reserve Banks, may enter into contracts which contain varying degrees of off-balance-sheet market risk, because they represent contractual commitments involving future settlement and counter-party credit risk. The FRBNY controls credit risk by obtaining credit approvals, establishing transaction limits, and performing daily monitoring procedures.

While the application of current market prices to the securities currently held in the SOMA portfolio and investments denominated in foreign currencies may result in values substantially above or below their carrying values, these unrealized changes in value would have no direct effect on the quantity of reserves available to the banking system or on the prospects for future Reserve Bank earnings or capital. Both the domestic and foreign components of the SOMA portfolio from time to time involve transactions that can result in gains or losses when holdings are sold prior to maturity. Decisions regarding the securities and foreign currencies transactions, including their purchase and sale, are motivated by monetary policy objectives rather than profit. Accordingly, market values, earnings, and any gains or losses resulting from the sale of such currencies and securities are incidental to the open market operations and do not motivate its activities or policy decisions.

U.S. government and federal agency securities and investments denominated in foreign currencies comprising the SOMA are recorded at cost, on a settlement-date basis, and adjusted for amortization of premiums or accretion of discounts on a straight-line basis. Interest income is accrued on a straight-line basis and is reported as "Interest on U.S. government and federal agency securities" or "Interest on investments denominated in foreign currencies," as appropriate. Income earned on securities lending transactions is reported as a component of "Other income." Gains and losses resulting from sales of securities are determined by specific issues based on average cost. Gains and losses on the sales of U.S. government and federal agency securities are reported as "U.S. government securities gains (losses), net." Foreign-currency-denominated assets are revalued daily at current foreign currency market exchange rates in order to report these assets in U.S. dollars. Realized and unrealized gains and losses on investments denominated in foreign currencies are reported as "Foreign currency gains (losses), net." Foreign currencies held through F/X swaps, when initiated by the counter-party, and warehousing arrangements are revalued daily, with the unrealized gain or loss reported by the FRBNY as a component of "Other assets" or "Other liabilities," as appropriate.

Balances of U.S. government and federal agency securities bought outright, securities sold under agreements to repurchase, securities loaned, investments denominated in foreign currency, interest income and expense, securities lending fee income, amortization of premiums and discounts on securities bought outright, gains and losses on sales of securities, and realized and unrealized gains and losses on investments denominated in foreign currencies, excluding those held under an F/X swap arrangement, are allocated to each Reserve Bank. Income from securities lending transactions undertaken by the FRBNY are also allocated to each Reserve Bank. Securities purchased under agreements to resell and unrealized gains and losses on the revaluation of foreign currency holdings under F/X swaps and warehousing arrangements are allocated to the FRBNY and not to other Reserve Banks.

e. Bank Premises, Equipment, and Software

Bank premises and equipment are stated at cost less accumulated depreciation. Depreciation is calculated on a straight-line basis over estimated useful lives of assets ranging from 2 to 50 years. New assets, major alterations, renovations, and improvements are capitalized at cost as additions to the asset accounts. Maintenance, repairs, and minor replacements are charged to operations in the year incurred. Costs incurred for software, either developed internally or acquired for internal use, during the application development stage are capitalized based on the cost of direct services and materials associated with designing, coding, installing, or testing software.

f. Interdistrict Settlement Account

At the close of business each day, all Reserve Banks and branches assemble the payments due to or from other Reserve Banks and branches as a result of transactions involving accounts residing in other Districts that occurred during the day's operations. Such transactions may include funds settlement, check clearing and ACH operations, and allocations of shared expenses. The cumulative net amount due to or from other Reserve Banks is reported as the "Interdistrict settlement account."

g. Federal Reserve Notes

Federal Reserve notes are the circulating currency of the United States. These notes are issued through the various Federal Reserve agents (the Chairman of the Board of Directors of each Reserve Bank) to the Reserve Banks upon deposit with such agents of certain classes of collateral security, typically U.S. government securities. These notes are identified as issued to a specific Reserve Bank. The Federal Reserve Act provides that the collateral security tendered by the Reserve Bank to the Federal Reserve agent must be equal to the sum of the notes applied for by such Reserve Bank. In accordance with the Federal Reserve Act, gold certificates, special drawing rights certificates, U.S. government and federal agency securities, securities purchased under agreements to resell, loans to depository institutions, and investments denominated in foreign currencies are pledged as collateral for net Federal Reserve notes outstanding. The collateral value is equal to the book value of the collateral tendered, with the exception of securities, whose collateral value is equal to the par value of the securities tendered, and securities purchased under agreements to resell, which are valued at the contract amount. The par value of securities pledged for securities sold under agreements to repurchase is similarly deducted. The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize the Federal Reserve notes. The Reserve Banks have entered into an agreement which provides for certain assets of the Reserve Banks to be jointly pledged as collateral for the Federal Reserve notes of all Reserve Banks in order to satisfy their obligation of providing sufficient collateral for outstanding Federal Reserve notes. In the event that this collateral is insufficient, the Federal Reserve Act provides that Federal Reserve notes become a first and paramount lien on all the assets of the Reserve Banks. Finally, as obligations of the United States, Federal Reserve notes are backed by the full faith and credit of the United States government.

The "Federal Reserve notes outstanding, net" account represents the Bank's Federal Reserve notes outstanding, reduced by its currency holdings of $4,065 million and $3,808 million at December 31, 2002, and December 31, 2001, respectively.

h. Capital Paid-in

The Federal Reserve Act requires that each member bank subscribe to the capital stock of the Reserve Bank in an amount equal to 6 percent of the capital and surplus of the member bank. As a member bank's capital and surplus changes, its holdings of the Reserve Bank's stock must be adjusted. Member banks are those state-chartered banks that apply and are approved for membership in the System and all national banks. Currently, only one-half of the subscription is paid-in and the remainder is subject to call. These shares are nonvoting with a par value of $100. They may not be transferred or hypothecated. By law, each

member bank is entitled to receive an annual dividend of 6 percent on the paid-in capital stock. This cumulative dividend is paid semiannually. A member bank is liable for Reserve Bank liabilities up to twice the par value of stock subscribed by it.

i. Surplus

The Board of Governors requires Reserve Banks to maintain a surplus equal to the amount of capital paid-in as of December 31. This amount is intended to provide additional capital and reduce the possibility that the Reserve Banks would be required to call on member banks for additional capital. Pursuant to Section 16 of the Federal Reserve Act, Reserve Banks are required by the Board of Governors to transfer to the U.S. Treasury excess earnings, after providing for the costs of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid-in.

In the event of losses or a substantial increase in capital, payments to the U.S. Treasury are suspended until such losses are recovered through subsequent earnings. Weekly payments to the U.S. Treasury may vary significantly.

j. Income and Costs related to Treasury Services

The Bank is required by the Federal Reserve Act to serve as fiscal agent and depository of the United States. By statute, the Department of the Treasury is permitted, but not required, to pay for these services.

k. Taxes

The Reserve Banks are exempt from federal, state, and local taxes, except for taxes on real property, which are reported as a component of "Occupancy expense."

4. U.S. Government and Federal Agency Securities

Securities bought outright are held in the SOMA at the FRBNY. An undivided interest in SOMA activity and the related premiums, discounts and income, with the exception of securities purchased under agreements to resell, is allocated to each Reserve Bank on a percentage basis derived from an annual settlement of interdistrict clearings. The settlement, performed in April of each year, equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding. The Bank's allocated share of SOMA balances was approximately 5.729 percent and 6.008 percent at December 31, 2002 and 2001, respectively.

The Bank's allocated share of securities held in the SOMA at December 31 that were bought outright, was as follows (in millions):

	2002	2001
Par value:		
Federal agency	$1	$1
U.S. government:		
Bills	12,988	10,939
Notes	17,067	15,978
Bonds	6,006	6,228
Total par value	36,062	33,146
Unamortized premiums	616	679
Unaccreted discounts	(60)	(77)
Total allocated to Bank	$36,618	$33,748

Total SOMA securities bought outright were $639,125 million and $561,701 million at December 31, 2002 and 2001, respectively.

The maturity distribution of U.S. government and federal agency securities bought outright which were allocated to the Bank at December 31, 2002, was as follows (in millions):

	Par value		
	U.S. Government Securities	Federal Agency Obligations	Total
Maturities of Securities Held			
Within 15 days	$1,572	$–	$1,572
16 days to 90 days	8,836	–	8,836
91 days to 1 year	8,127	–	8,127
Over 1 year to 5 years	9,898	1	9,899
Over 5 years to 10 years	3,054	–	3,054
Over 10 years	4,574	–	4,574
Total	$36,061	$1	$36,062

As mentioned in footnote 3, in December 2002 the FRBNY replaced MSP transactions with securities sold under agreements to repurchase. At December 31, 2002, securities sold under agreements to repurchase with a contract amount of $21,091 million and a par value of $23,188 million were outstanding, of which $1,208 million and $1,329 million, respectively, were allocated to the Bank. At December 31, 2001, MSP transactions involving U.S. government securities with a par value of $23,188 million, were outstanding, of which $1,393 million was allocated to the Bank. Securities sold under agreements to repurchase and MSP transactions are generally overnight arrangements.

At December 31, 2002 and 2001, U.S. government securities with par values of $1,841 million and $7,345 million, respectively, were loaned from the SOMA, of which $105 million and $441 million were allocated to the Bank.

5. Investments Denominated in Foreign Currencies

The FRBNY, on behalf of the Reserve Banks, holds foreign currency deposits with foreign central banks and the Bank for International Settlements, and invests in foreign government debt instruments. Foreign government debt instruments held include both securities bought outright and securities purchased under agreements to resell. These investments are guaranteed as to principal and interest by the foreign governments.

Each Reserve Bank is allocated a share of foreign-currency-denominated assets, the related interest income, and realized and unrealized foreign currency gains and losses, with the exception of unrealized gains and losses on F/X swaps and warehousing transactions. This allocation is based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31. The Bank's allocated share of investments denominated in foreign currencies was approximately 5.698 percent and 5.198 percent at December 31, 2002 and 2001, respectively.

The Bank's allocated share of investments denominated in foreign currencies, valued at current foreign currency market exchange rates at December 31, was as follows (in millions):

	2002	2001
European Union Euro:		
Foreign currency deposits	$318	$239
Government debt instruments including agreements to resell	188	140
Japanese Yen:		
Foreign currency deposits	102	99
Government debt instruments including agreements to resell	351	276
Accrued interest	5	3
Total	$964	$757

Total investments denominated in foreign currencies were $16,913 million and $14,559 million at December 31, 2002 and 2001, respectively.

The maturity distribution of investments denominated in foreign currencies which were allocated to the Bank at December 31, 2002, was as follows (in millions):

Maturities of Investments Denominated in Foreign Currencies	
Within 1 year	$890
Over 1 year to 5 years	51
Over 5 years to 10 years	23
Over 10 years	–
Total	$964

At December 31, 2002 and 2001, there were no open foreign exchange contracts or outstanding F/X swaps.

At December 31, 2002 and 2001, the warehousing facility was $5,000 million, with zero balance outstanding.

57

6. Bank Premises and Equipment

A summary of bank premises and equipment at December 31 is as follows (in millions):

	2002	2001
Bank premises and equipment:		
Land	$22	$22
Buildings	101	98
Building machinery and equipment	17	15
Construction in progress	2	2
Furniture and equipment	65	65
	207	202
Accumulated depreciation	(96)	(90)
Bank premises and equipment, net	$111	$112

Depreciation expense was $10 million and $11 million for the years ended December 31, 2002 and 2001, respectively.

The Bank leases unused space to outside tenants. Those leases have terms ranging from one to eight years. Rental income from such leases was $10 million for each of the years ended December 31, 2002 and 2001. Future minimum lease payments under noncancelable agreements in existence at December 31, 2002, were (in millions):

2003	$7
2004	6
2005	5
2006	3
2007	2
Thereafter	5
	$28

7. Commitments and Contingencies

At December 31, 2002, the Bank was obligated under noncancelable leases for premises and equipment with terms ranging from one to approximately ten years. These leases provide for increased rentals based upon increases in real estate taxes, operating costs, or selected price indices.

Rental expense under operating leases for certain operating facilities, warehouses, and data processing and office equipment (including taxes, insurance, and maintenance when included in rent), net of sublease rentals, was $2 million and $1 million for the years ended December 31, 2002 and 2001, respectively. Certain of the Bank's leases have options to renew.

Future minimum rental payments under noncancelable operating leases and capital leases, net of sublease rentals, with terms of one year or more, at December 31, 2002, were (in thousands):

	Operating	Capital
2003	$502	$–
2004	502	–
2005	502	–
2006	502	–
2007	502	–
Thereafter	2,385	–
	$4,895	–
Amount representing interest		–
Present value of net minimum lease payment		$–

At December 31, 2002, other commitments and long-term obligations in excess of one year were $1 million.

Under the Insurance Agreement of the Federal Reserve Banks dated as of March 2, 1999, each of the Reserve Banks has agreed to bear, on a per incident basis, a pro rata share of losses in excess of 1 percent of the capital paid-in of the claiming Reserve Bank, up to 50 percent of the total capital paid-in of all Reserve Banks. Losses are borne in the ratio that a Reserve Bank's capital paid-in bears to the total capital paid-in of all Reserve Banks at the beginning of the calendar year in which the loss is shared. No claims were outstanding under such agreement at December 31, 2002 or 2001.

The Bank is involved in certain legal actions and claims arising in the ordinary course of business. Although it is difficult to predict the ultimate outcome of these actions, in management's opinion, based on discussions with counsel, the aforementioned litigation and claims will be resolved without material adverse effect on the financial position or results of operations of the Bank.

8. Retirement and Thrift Plans

Retirement Plans

The Bank currently offers two defined benefit retirement plans to its employees, based on length of service and level of compensation. Substantially all of the Bank's employees participate in the Retirement Plan for Employees of the Federal Reserve System ("System Plan") and the Benefit Equalization Retirement Plan ("BEP") and certain Bank officers participate in a Supplemental Employee Retirement Plan ("SERP"). The System Plan is a multi-employer plan with contributions fully funded by participating employers. No separate accounting is maintained of assets contributed by the participating employers. The Bank's projected benefit obligation and net pension costs for the BEP at December 31, 2002 and 2001 and for the SERP at December 31, 2002, and for the years then ended, are not material.

Thrift Plan

Employees of the Bank may also participate in the defined contribution Thrift Plan for Employees of the Federal Reserve System ("Thrift Plan"). The Bank's Thrift Plan contributions totaled $4 million and $3 million for the years ended December 31, 2002 and 2001, respectively, and are reported as a component of "Salaries and other benefits."

9. Postretirement Benefits Other than Pensions and Postemployment Benefits

Postretirement Benefits Other than Pensions

In addition to the Bank's retirement plans, employees who have met certain age and length of service requirements are eligible for both medical benefits and life insurance coverage during retirement.

The Bank funds benefits payable under the medical and life insurance plans as due and, accordingly, has no plan assets. Net postretirement benefit costs are actuarially determined using a January 1 measurement date.

Following is a reconciliation of beginning and ending balances of the benefit obligation (in millions):

	2002	2001
Accumulated postretirement benefit obligation at January 1	$40.4	$49.5
Service cost-benefits earned during the period	1.0	1.0
Interest cost of accumulated benefit obligation	2.8	2.8
Actuarial loss (gain)	1.7	(6.6)
Contributions by plan participants	0.3	0.3
Benefits paid	(1.9)	(1.6)
Plan amendments, acquisitions, foreign currency exchange rate changes, business combinations, divestitures, curtailments, settlements, and special termination benefits	(0.4)	(5.0)
Accumulated postretirement benefit obligation at December 31	$43.9	$40.4

Following is a reconciliation of the beginning and ending balances of the plan assets, the unfunded postretirement benefit obligation, and the accrued postretirement benefit costs (in millions):

	2002	2001
Fair value of plan assets at January 1	$–	$–
Actual return on plan assets	–	–
Contributions by the employer	1.6	1.3
Contributions by plan participants	0.3	0.3
Benefits paid	(1.9)	(1.6)
Fair value of plan assets at December 31	$–	$–
Unfunded postretirement benefit obligation	43.9	40.4
Unrecognized initial net transition asset (obligation)	–	–
Unrecognized prior service cost	8.5	9.2
Unrecognized net actuarial gain (loss)	4.8	6.6
Accrued postretirement benefit costs	$57.2	$56.2

Accrued postretirement benefit costs are reported as a component of "Accrued benefit costs."

At December 31, 2002 and 2001, the weighted average discount rate assumptions used in developing the benefit obligation were 6.75 percent and 7.0 percent, respectively.

For measurement purposes, a 9.0 percent annual rate of increase in the cost of covered health care

benefits was assumed for 2003. Ultimately, the health care cost trend rate is expected to decrease gradually to 5.0 percent by 2008, and remain at that level thereafter.

Assumed health care cost trend rates have a significant effect on the amounts reported for health care plans. A one percentage-point change in assumed health care cost trend rates would have the following effects for the year ended December 31, 2002 (in millions):

	One-Percentage-Point Increase	One-Percentage-Point Decrease
Effect on aggregate of service and interest cost components of net periodic postretirement benefit costs	$0.7	$(0.6)
Effect on accumulated postretirement benefit obligation	6.9	(5.5)

The following is a summary of the components of net periodic postretirement benefit costs for the years ended December 31 (in millions):

	2002	2001
Service cost-benefits earned during the period	$1.0	$1.0
Interest cost of accumulated benefit obligation	2.8	2.8
Amortization of prior service cost	(1.1)	(0.6)
Recognized net actuarial loss	(0.2)	(0.4)
Net periodic postretirement benefit costs	$2.5	$2.8

Net periodic postretirement benefit costs are reported as a component of "Salaries and other benefits."

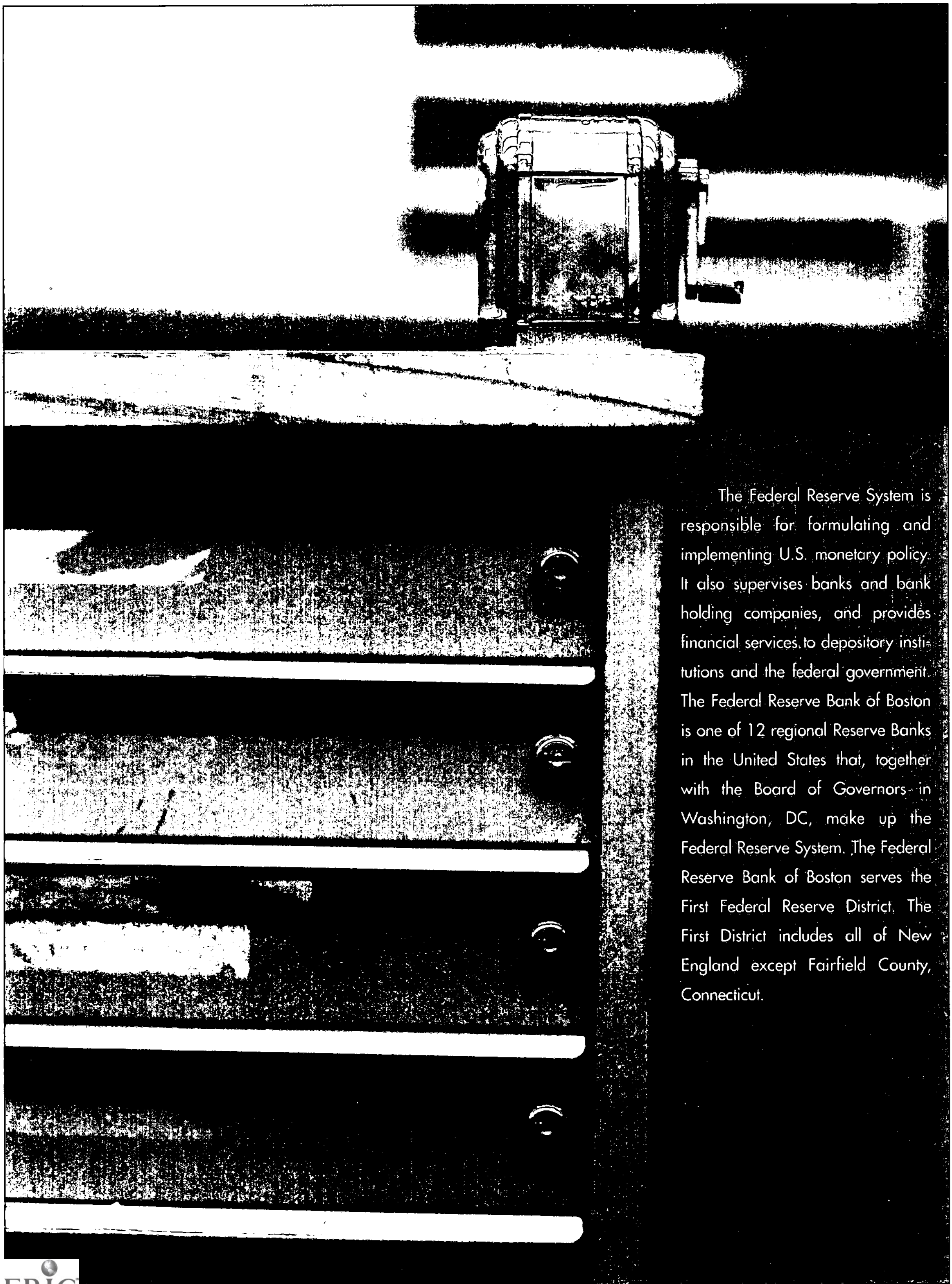
Postemployment benefits

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined and include the cost of medical and dental insurance, survivor income, and disability benefits. Costs were projected using the same discount rate and health care trend rates as were used for projecting postretirement costs. The accrued postemployment benefit costs recognized by the Bank at December 31, 2002 and 2001, were $7 million and $6 million, respectively. This cost is included as a component of "Accrued benefit costs." Net periodic postemployment benefit costs included in 2002 and 2001 operating expenses were $2 million for each year.

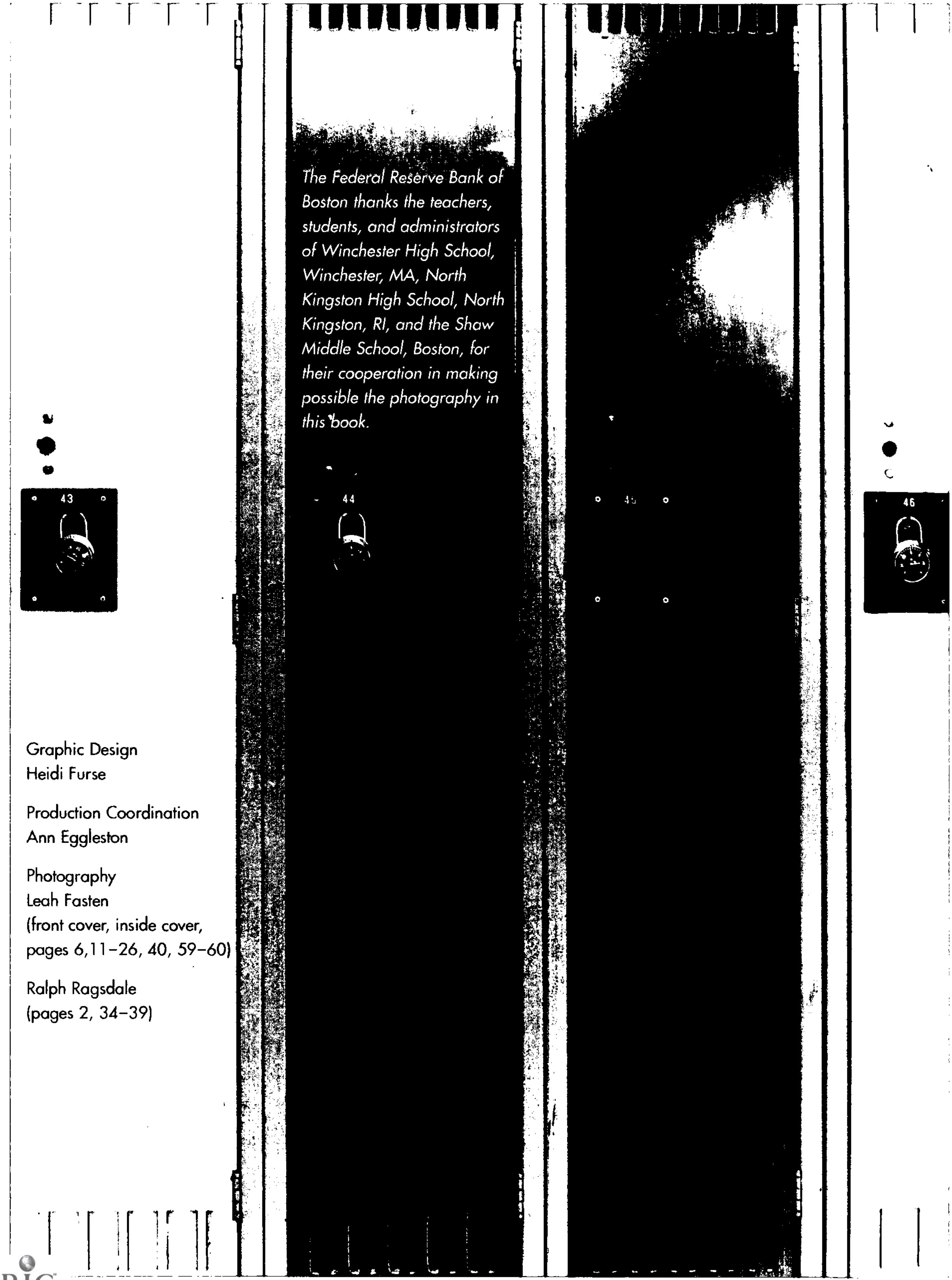
10. Subsequent Event

In January 2003, the System announced plans to restructure its check collection operations. The restructuring plans include streamlining the check management structure, reducing staff, decreasing the number of check-processing locations, and increasing processing capacity in other locations. The restructuring, which is expected to begin in 2003 and conclude by the end of 2004, will result in the Bank consolidating its check adjustments function in the Windsor Locks office.

At this time, the Reserve Banks have not developed detailed estimates of the cost of the restructuring plan in the aggregate or for the individual Reserve Banks affected.



The Federal Reserve System is responsible for formulating and implementing U.S. monetary policy. It also supervises banks and bank holding companies, and provides financial services to depository institutions and the federal government. The Federal Reserve Bank of Boston is one of 12 regional Reserve Banks in the United States that, together with the Board of Governors in Washington, DC, make up the Federal Reserve System. The Federal Reserve Bank of Boston serves the First Federal Reserve District. The First District includes all of New England except Fairfield County, Connecticut.



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Our Mission:

As a part of the nation's central bank, the Federal Reserve Bank of Boston promotes sound growth and financial stability in New England and the nation. The Bank contributes to local communities, the region, and the nation through its high-quality research, regulatory oversight, and financial services, and through its commitment to leadership and innovation.

Our Values:

Integrity

Serving the Public

Respect

Leadership

Excellence

Continuous Improvement